Creatr

User Manual

Materialise
innovators you can count on

Table of Contents

Table of Contents *1*
Installation *3*
Installation of the software 3
Registration of the software 6
Quick start and Interface *10*
Main Toolbar *11*
New Project | 12
Load Project | 12
Save Project | 12
Select Part(s) mode | 12
Licenses | 13
Settings | 13
Help | 13
Platform *14*
New | 14
Import | 14
Unload | 14
Save | 14
Part *15*
Import | 15
Unload | 15
Save | 15
Parts tool sheet 15
Part Info tool sheet 16
Position *17*
Translate | 17
Rotate | 17
Bottom/Top | 18
Rescale | 19
Duplicate | 19
Automatic Placement | 20
Analyze *20*
Leapfrog Build Processor *21*
Dialog Relations 21
Submit Job dialog 24
Configure Printer Dialog 27
Profile editor Dialog 33
Visualize [View toolbar and Tool sheets] *48*
View Toolbar *48*
Rotate and Pan 48
Zooming 50
ISO views 50
Show/Hide 50
Copy to clipboard/Print2D 50
Part Info 52

Labels 52
View Pages *52*
View 53
Multi-Section 54
Text 55
Drawing 56
Distance 57
Licenses and Settings [Main Toolbar] ***59***
Licenses | 59
Settings | 60
System requirements ***71***
Minimal hardware requirements 71
Supported Browsers for built-in Information Page 71
Creatr License Agreement ***72***

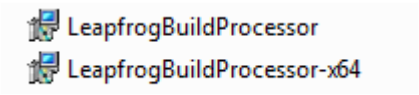
Installation

Installation of the software

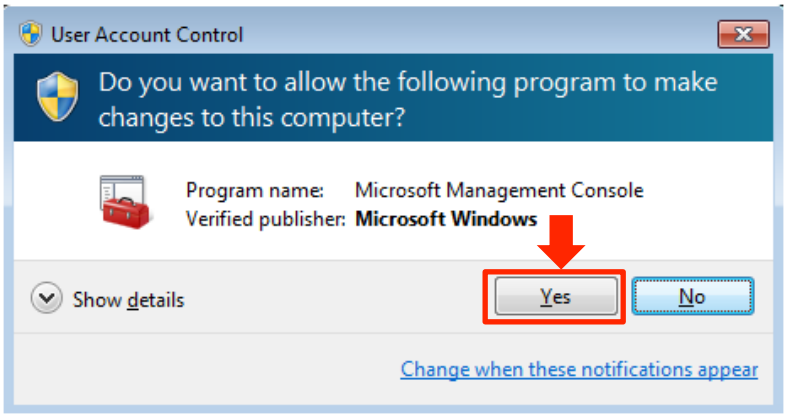
- Download the latest installer of the Creatr software on the Leapfrog website:

  http://support.lpfrg.com/support/home

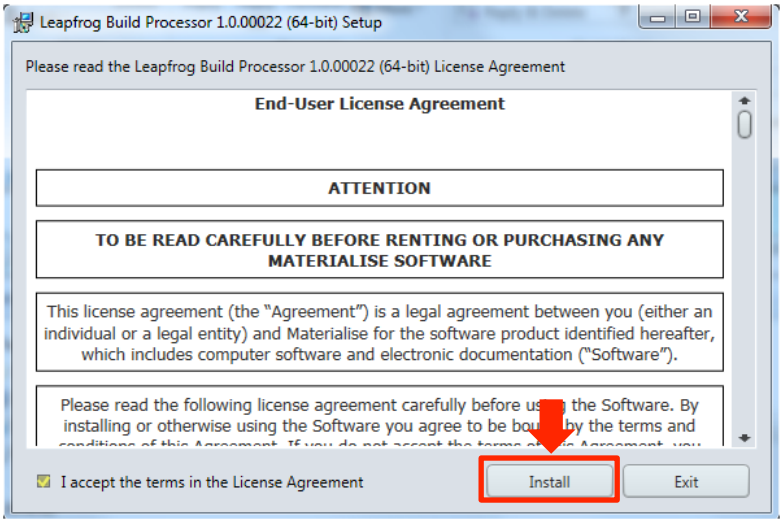
- Run the installer
  - Run the appropriate installer for your system by double clicking the installer

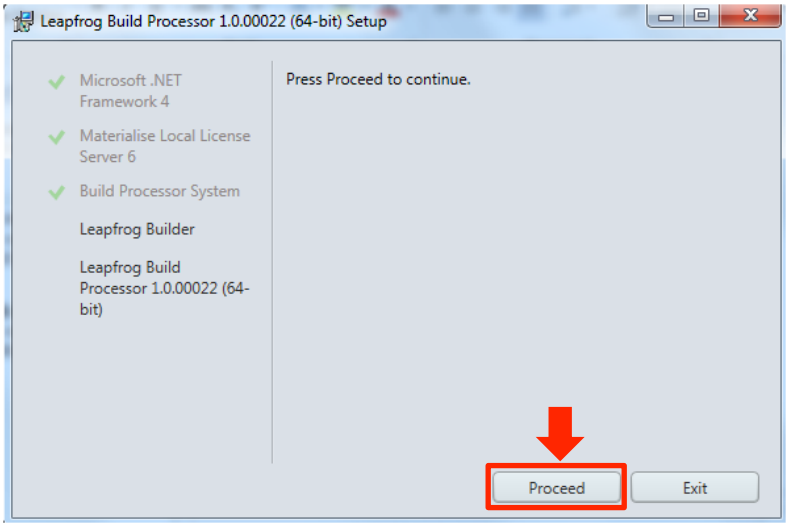
  - Allow the installer to make changes to the computer

    
    User Account Control
Do you want to allow the following program to make changes to this computer?
Program name: Microsoft Management Console
Verified publisher: Microsoft Windows
Show details
Yes
No
Change when these notifications appear

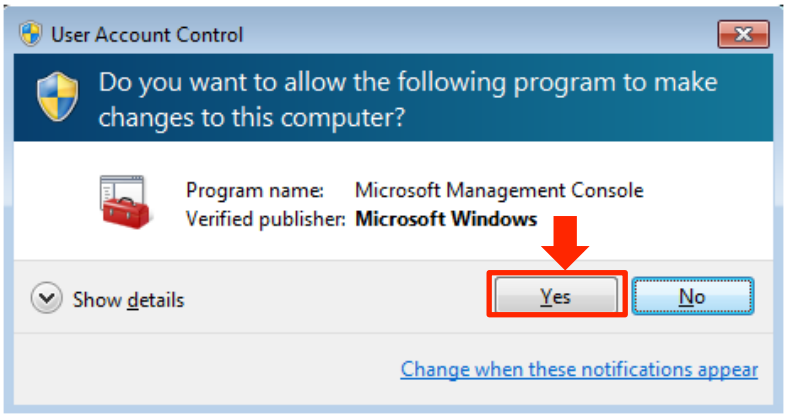
  - Accept the terms of the End-user license agreement (EULA) and press install.

    
    Leapfrog Build Processor 1.0.00022 (64-bit) Setup
Please read the Leapfrog Build Processor 1.0.00022 (64-bit) License Agreement
End-User License Agreement
ATTENTION
TO BE READ CAREFULLY BEFORE RENTING OR PURCHASING ANY MATERIALISE SOFTWARE
This license agreement (the "Agreement") is a legal agreement between you (either an individual or a legal entity) and Materialise for the software product identified hereafter, which includes computer software and electronic documentation ("Software").
I accept the terms in the License Agreement
Install
Exit

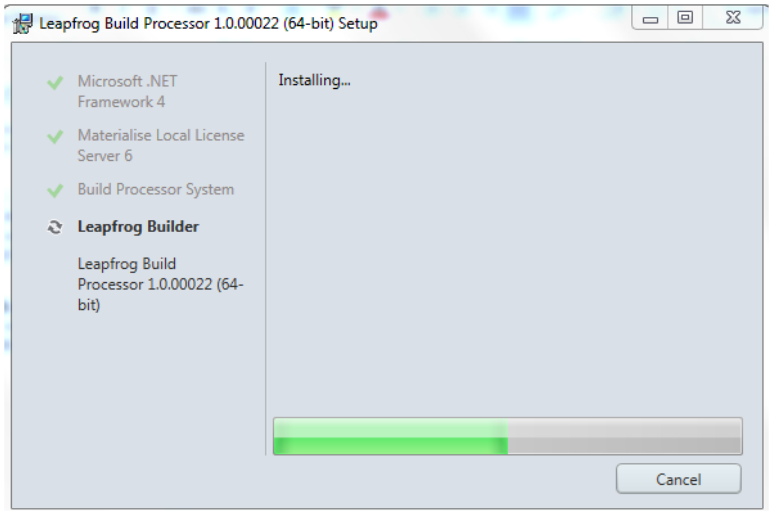
- Activate the installation process by pressing the Proceed button



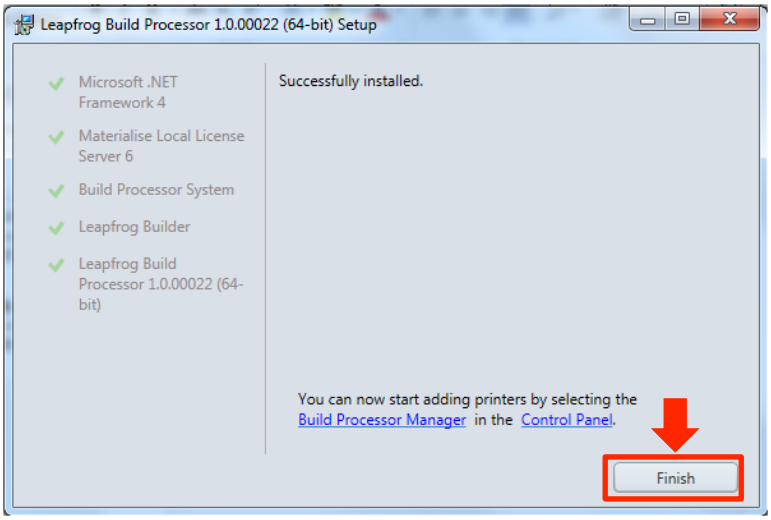
- Allow the installer to make changes to the computer


User Account Control
Do you want to allow the following program to make changes to this computer?
Program name: Microsoft Management Console
Verified publisher: Microsoft Windows
Show details
Yes
No
Change when these notifications appear

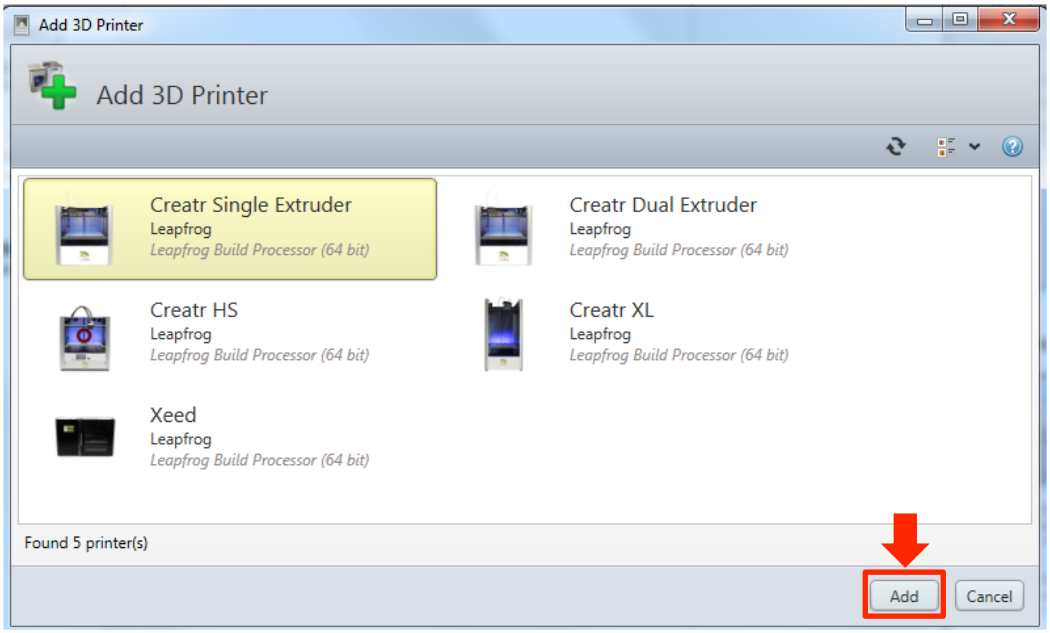
- Monitor the installation process and wait for it to finish



- Now the software is successfully installed so you can press the Finish button


Leapfrog Build Processor 1.0.00022 (64-bit) Setup
Microsoft .NET Framework 4
Materialise Local License Server 6
Build Processor System
Leapfrog Builder
Leapfrog Build Processor 1.0.00022 (64-bit)
Successfully installed.
You can now start adding printers by selecting the Build Processor Manager in the Control Panel.
Finish

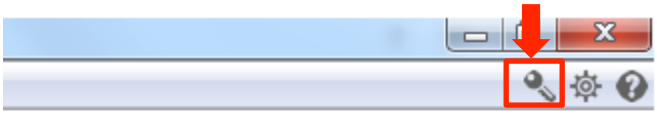
- Select the printer you want to use with the software and press the Add button



- The software is now completely installed and just need to be activated

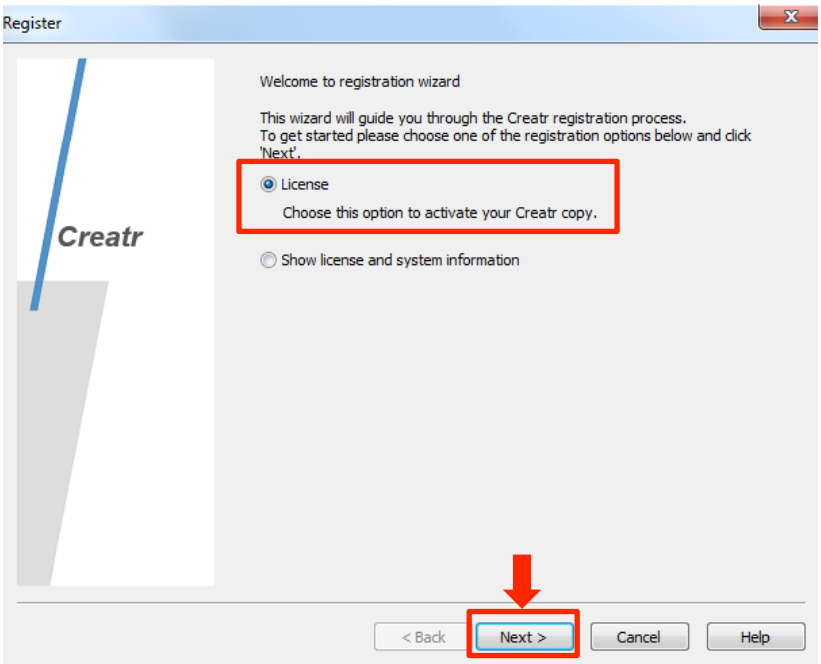
Registration of the software

- Open the Registration Wizard in the Creatr software by pushing the tool icon. When installing the software for the first time this will happen automatically when you start the Creatr software.

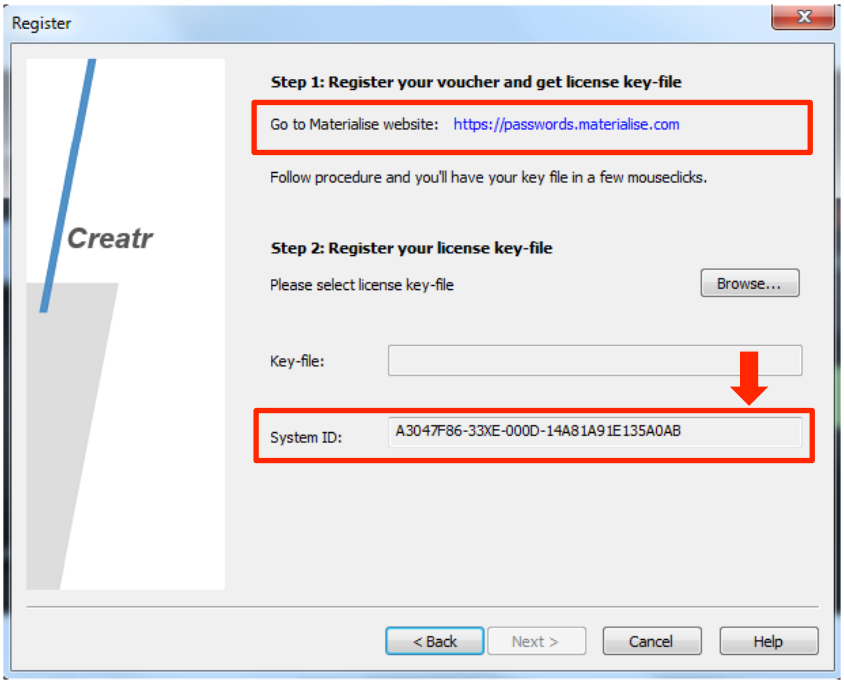


Materialise
innovators you can count on

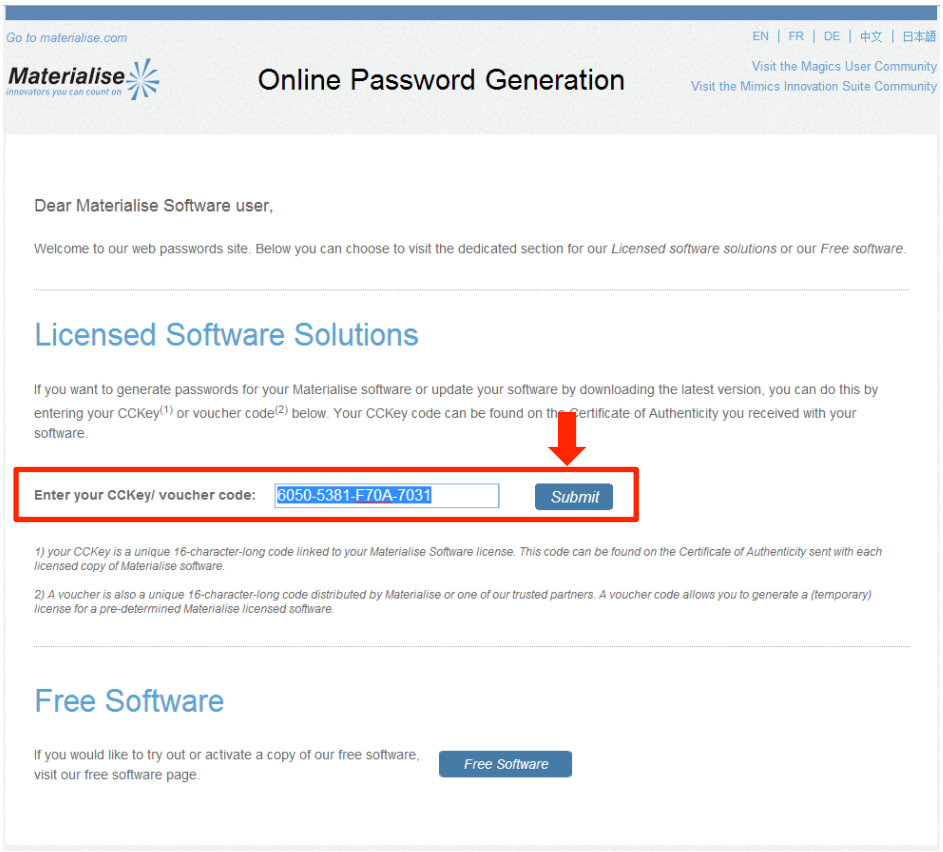
- Select the License Option and click next


Register
Creatr
Welcome to registration wizard
This wizard will guide you through the Creatr registration process.
To get started please choose one of the registration options below and click 'Next'.
License
Choose this option to activate your Creatr copy.
Show license and system information
< Back
Next >
Cancel
Help

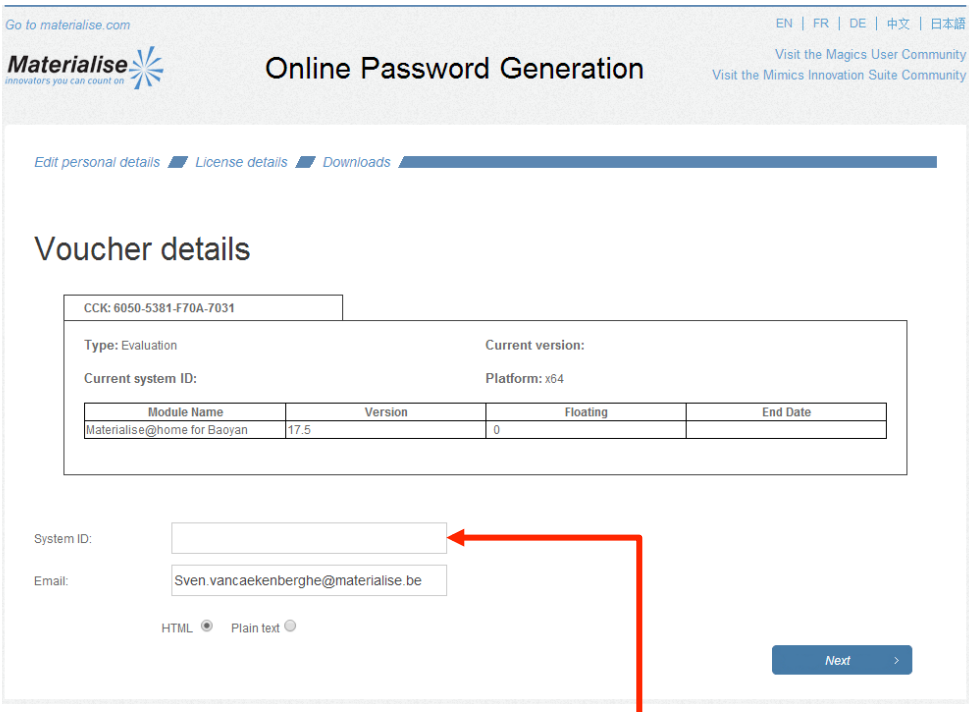
- Copy the system ID from the registration wizard and go to the Materialise password website by clicking the link. Make sure you have your voucher code ready.

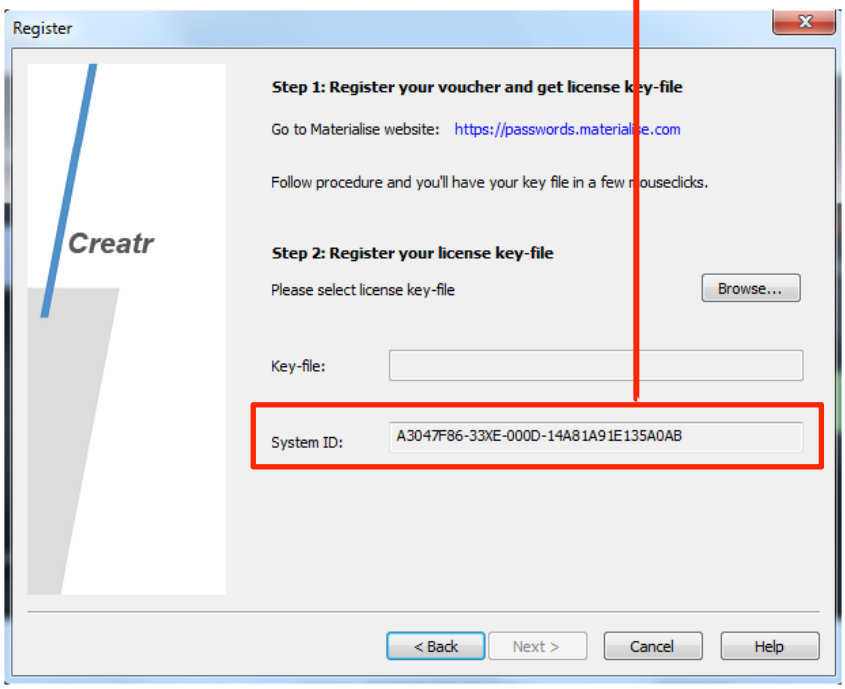


- In the licensed software solutions section fill in your voucher code you received from Leapfrog and press the submit button.


Go to materialise.com
EN | FR | DE | 中文 | 日本語
Materialise
innovators you can count on
Online Password Generation
Visit the Magics User Community
Visit the Mimics Innovation Suite Community
Dear Materialise Software user,
Welcome to our web passwords site. Below you can choose to visit the dedicated section for our Licensed software solutions or our Free software.
Licensed Software Solutions
If you want to generate passwords for your Materialise software or update your software by downloading the latest version, you can do this by entering your CCKey(1) or voucher code(2) below. Your CCKey code can be found on the Certificate of Authenticity you received with your software.
Enter your CCKey/ voucher code: 3050-5381-F70A-7031
Submit
1) your CCKey is a unique 16-character-long code linked to your Materialise Software license. This code can be found on the Certificate of Authenticity sent with each licensed copy of Materialise software.
2) A voucher is also a unique 16-character-long code distributed by Materialise or one of our trusted partners. A voucher code allows you to generate a (temporary) license for a pre-determined Materialise licensed software.
Free Software
If you would like to try out or activate a copy of our free software, visit our free software page.
Free Software

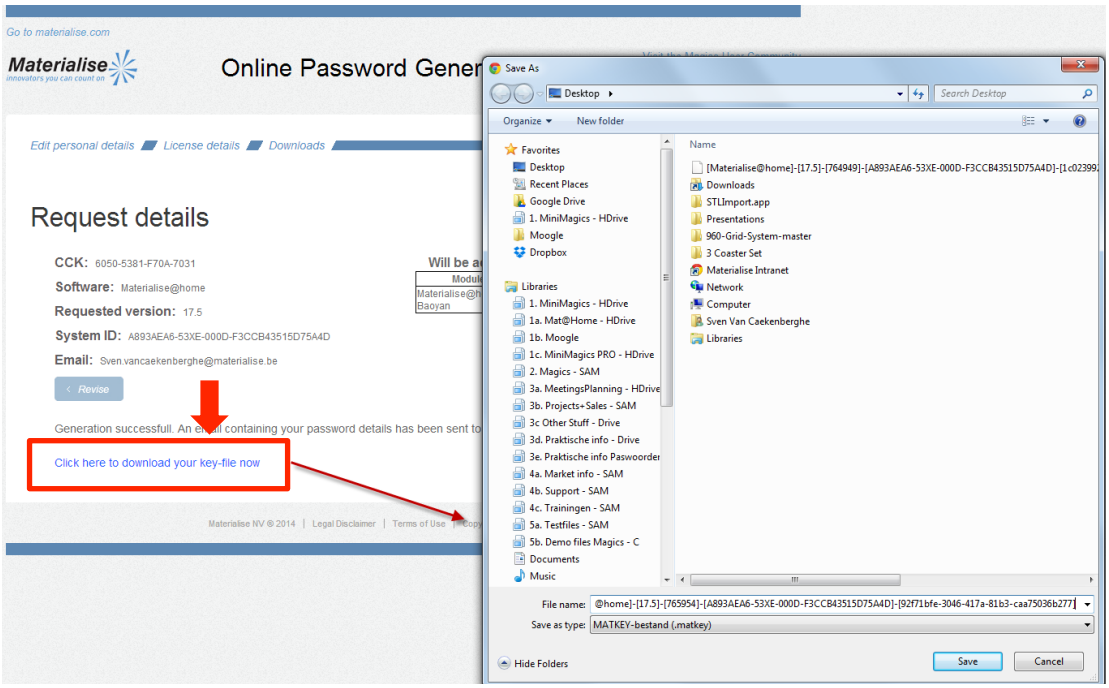
- Fill in your system ID from your computer that is provided by the registration wizard into system ID field on the password website and your email address and press the next button.



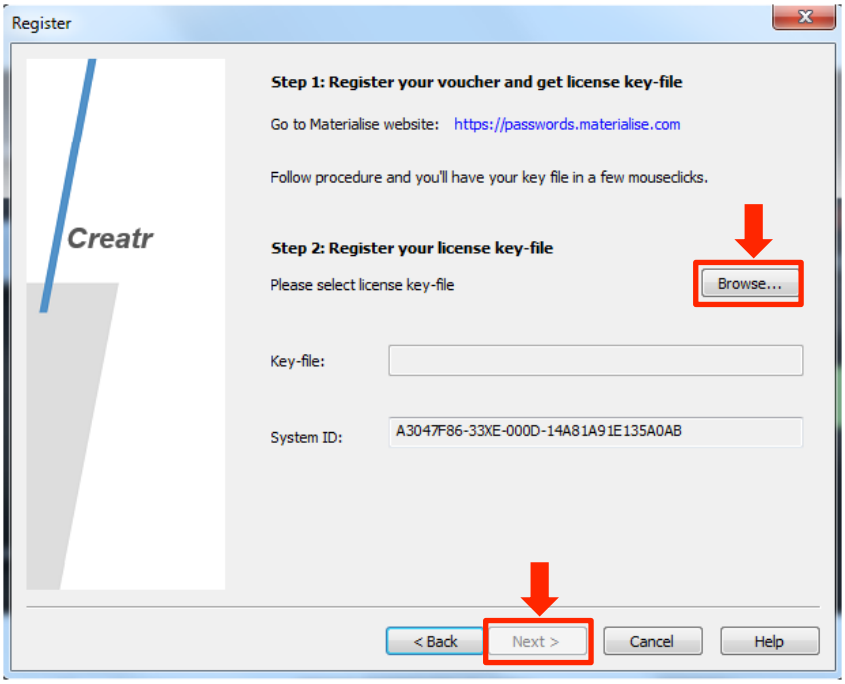


- Check the registration details and press the request password button

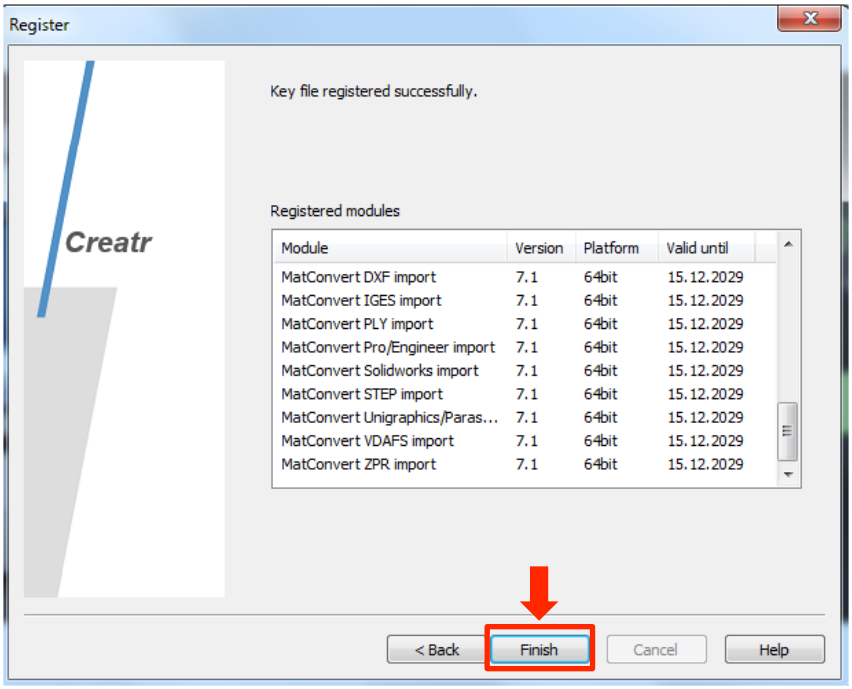
- Save the license key on your computer by clicking the download button



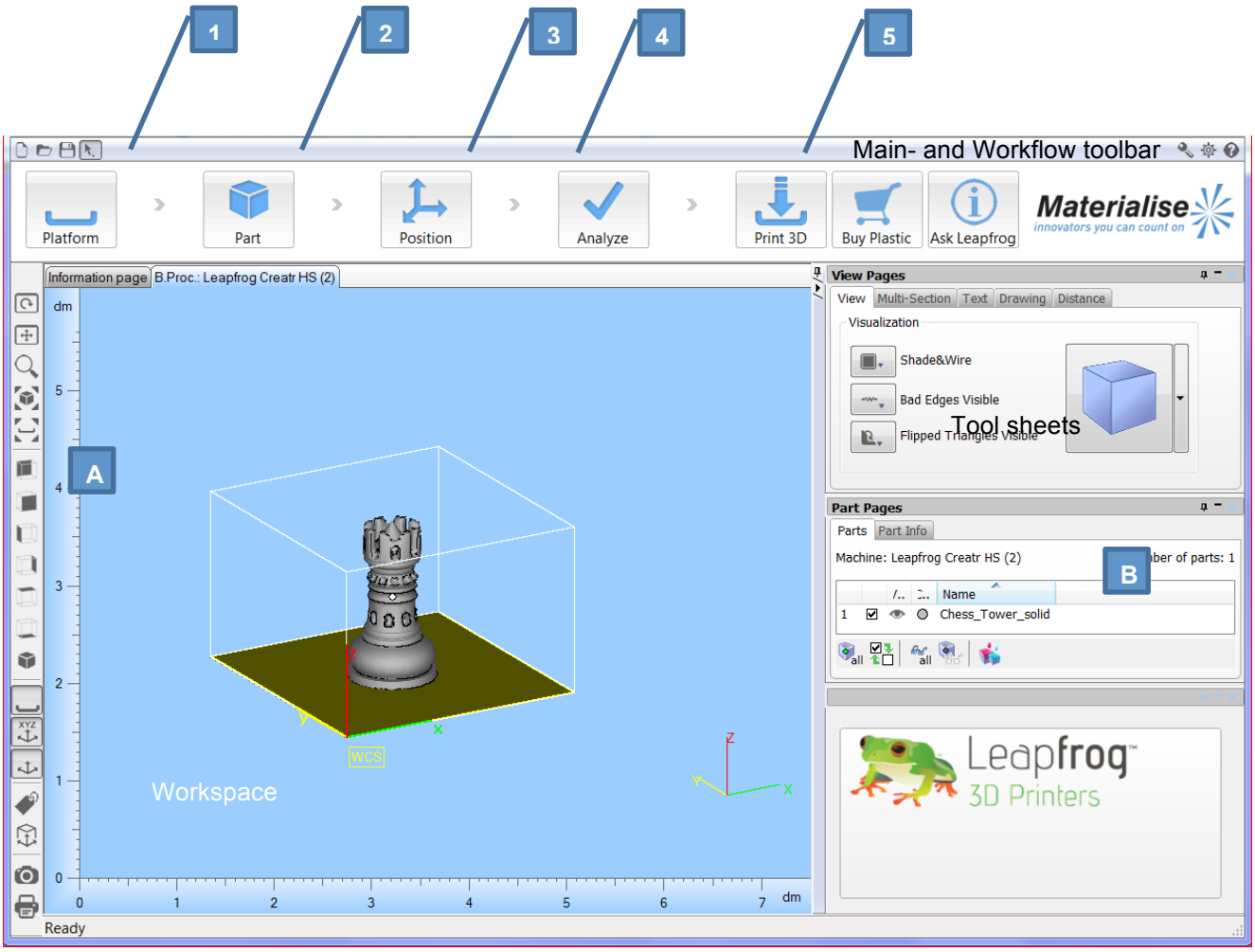
- Browse for the license key you stored on your computer in the previous step and press the next button



- Your license key is registered successfully and your software is ready to use. Press finish button the exit the registration wizard. Enjoy the software



Quick start and Interface



When you launch Creatr, you will arrive on the Information Page. To start working:

1. Click the **Platform** flow button and select *New* to choose your **3D-Printer**
2. Click the **Part** flow button and choose *Import* to load your **STL-file**
3. Click the **Position** flow button if you want to translate, rotate, rescale or duplicate your part(s)
4. Click the **Analyze** button to check if your loaded parts are **buildable or not**
5. Click the **Build Processor** button if you want to build your part(s) on your **3D-Printer**

A. Use the functions on the **View** toolbar to visualize & inspect your STL-files
B. You can find more advanced **visualization & communication** options on the **Tool sheets**

So be ready to 'Go with the Flow':

Main Toolbar

New Project |

This function will remove all parts and scenes from the current project and generates a new, empty project. The user is asked to save the current project (parts and scenes) before closing. If you want to work in two (or more) parallel Creatr sessions, just open Creatr a second time.

We refer to the *Platform menu* section if you want to create a new platform and load STL-files.

Load Project |

This function allows you to open an existing project in Creatr. The Creatr Project File (.fbf) is a dedicated file format of Materialise and has the ability to save or load information other than STL data with a particular STL file or files (project). Due to the Creatr Project File, you can save a whole project at once instead of saving all parts (STL-files) separately.

If you load a *.fbf file in Creatr, following information can be displayed (when present):

- STL-files
- Platforms and scenes
- Measurements and annotations

We refer to the *Parts menu* section if you want to import single parts (STL files).

Save Project |

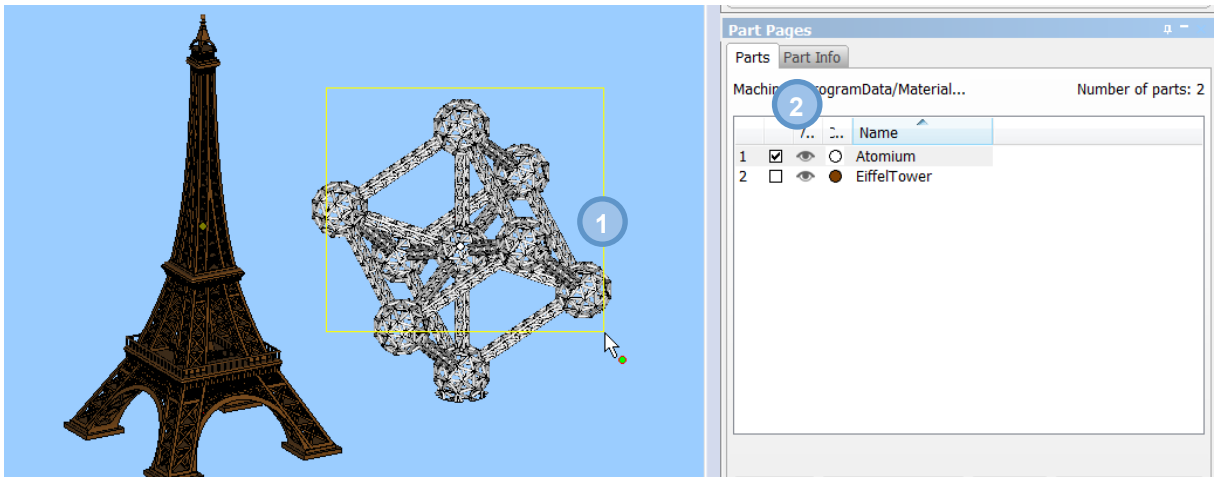
Saving STL-files in a project (**.fbf*) has the advantage of compressing the file and saving any other information such as platforms, scenes, measurements and annotations. The 'Save' function will ask you to re-name your project while preserving the original project.

*Use the *.fbf file format if you want to continue your work another time. It will save everything as it is when you save and close Creatr.*

Select Part(s) mode |

Use the ***Select Parts*** function to select parts individually or in groups (while in the mean viewing your workspace). To select a single part, first activate the ***Select Parts*** function. Then, click on the part or click and drag a window around the grey selection tag of the desired part (1). After releasing the button, the little dot of that part will be become white. A white dot means that the part is selected; a grey dot means that it is not selected.

To select multiple parts, either drag a single window around the desired tags, or depress and hold the shift key while clicking on several parts (or dragging multiple windows around the desired tags).



The Select Part(s) mode is the default mouse mode in Creatr. By performing a function e.g. a measurement, you can arrive in another mouse mode e.g. the measure mouse mode. Press ESC or the Select Part(s) button to return to the default mouse mode.

In addition to the *Select Part(s)* function, you can also select parts by checking them directly in the Part List (2).

We refer to the *Parts menu* section if you want to import parts (STL files) in *Creatr*.

Licenses |

Materialise Software is key protected. You need key-files to activate and register your *Creatr* software. When you start *Creatr* for the first time, the License Wizard will automatically start up to assist you in registering. You can also open the Registration Wizard by clicking on the Licenses button in the Main Toolbar of *Creatr*. A detailed description of Licensing is given at the end of the manual.

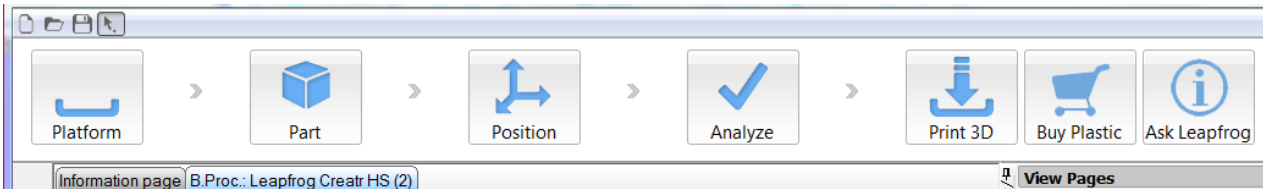
Settings |

This button will open the Settings dialog of *Creatr*. A detailed overview of the Settings is also given at the end of the manual.

Help |

Click this button to open the PDF manual you are reading right now.

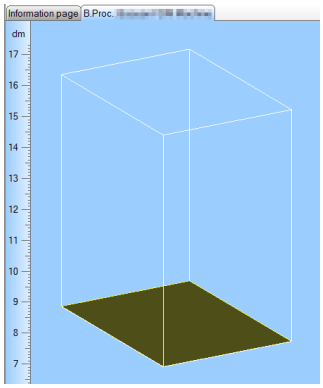
Platform



To start working in *Creatr*, you should create a Platform or load an existing one. Once you have a Platform, you can start importing parts (second menu in the Flow Toolbar).

New | New

The *New* button in the Platform's menu will open a dialog where you can choose your 3D-Printer from the dropdown list (each 3D-printer will have a prefix B.Proc which is the abbreviation of Build Processor). After pressing OK, the platform and build-envelope of your selected 3D-Printer will be shown on the screen.



It is possible to create multiple Platforms and work on different Platforms in parallel. Each Platform will appear as a new tab in the workspace (named B.Proc. *'Your printer'*). Note that the *Information page* will always remain as first tab. You can toggle between different Platforms by clicking on the tab with the corresponding Platform or Scene name.

Remark: If you create a New Platform without choosing a machine (no machine), the newly created tab will be named Scene and the Workspace will be empty (no machine platform visible). It is not possible to print parts from an empty Scene, you should always select your 3D-Printer from the dropdown list.

Import | Import

This operations allows you to import an existing Platform (i.e. **.fbf*). The imported Platform (usually with parts) will be active and shown on your screen. Each imported Platform or Scene will appear as a separate tab in the workspace. If there are multiple Platforms inside the file, they will all open as a separate tab.

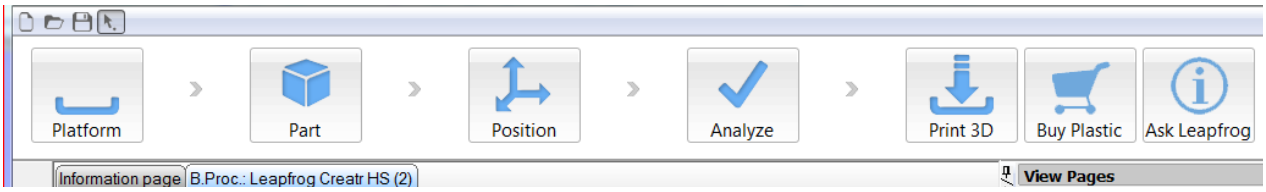
Unload | Unload

With this operation you can unload your active Platform or Scene (including all parts). A dialog will ask if you really wish to delete, press No if you want to save your Platform first.

Save | Save

This operation pops up a 'Save As' dialog. You can save your current Platform into a **.fbf* file.
This operation will only save the active Platform, use the Save Project function (Main toolbar) to save multiple Platforms and/or Scenes inside a **.fbf* file.

Part

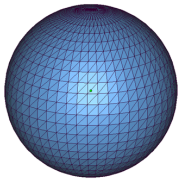


Creatr is based on the STL-file format which is the 3D-Printing Industry's standard data format. An STL file is a triangular representation of a 3D object: it will describe surfaces as a collection of triangles, which makes them ideal for use in Rapid Prototyping or any environment that requires a triangulated file.
Unlike CAD, STL uses triangles and not entities to describe an object. Each triangle is uniquely defined by its normal and three points that represent its vertices.

Digital CAD

2 entities
- Center point
- Radius

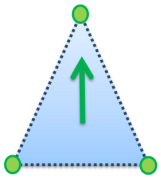
STL-file



Triangle 1
Triangle 2
Triangle 3
Triangle 4
…

Triangle 1500

Single Triangle



1 Triangle
=
3 vertices
&
1 normal

Import | Import

Use this button to Import parts on your Platform. You can choose to import **.stl,* or **.fbf* files.

- *.stl = 3D-Printing Industry's standard data format, contains a single part
- *.fbf = Dedicated data format of Materialise, can contain multiple parts. All parts are imported on the active Platform or Scene.

Creatr has several ***demo files*** available for use after installation. They can be accessed using the following path: C:\Program Files\Materialise\Creatr\demo_files.

Unload | Unload

This operation will unload all selected parts.

Save | Save

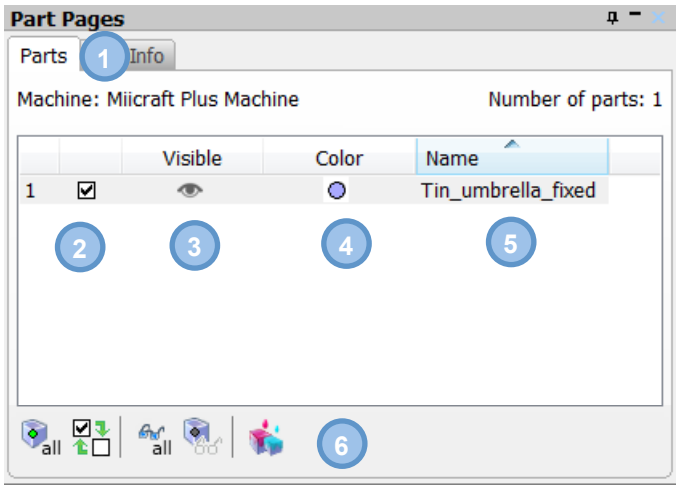
The *Save Part(s) As* dialog contains all different file formats that Creatr is capable of producing. You can specify your format in the *Save as type* dropdown box. By default, all parts are saved in a separate**.stl* file. Choose for the **.fbf* if you want to save all parts in a single file.

Parts tool sheet

As soon as one part is loaded, the Tool sheets will expand.

The Parts tab (1) can be a very useful and versatile tool for managing loaded parts. All parts currently loaded will be displayed in the list.

Select (or unselect) a single part via the checkboxes (2). Select multiple parts in the list by clicking on a part name to highlight the part and then using the Shift or Ctrl key and clicking on the names of the other desired parts (and then select/unselect one of the check boxes).



You can also Hide (3) parts by clicking on the glasses or change their Color (4). All actions performed on the tool sheet are activated immediately. If you double click on a part's Name (5), a pop-up dialog will appear where you can easily change the name. The buttons at the bottom (6) will facilitate your work with operations like: Select All, Invert Selection, Show All, Hide Unselected and Auto color.

Part Info tool sheet

The Part Info tab (1) will display all physical data of your part:

- Dimensions in X, Y and Z
- Mesh info: triangles and points
- Properties: surface and volume

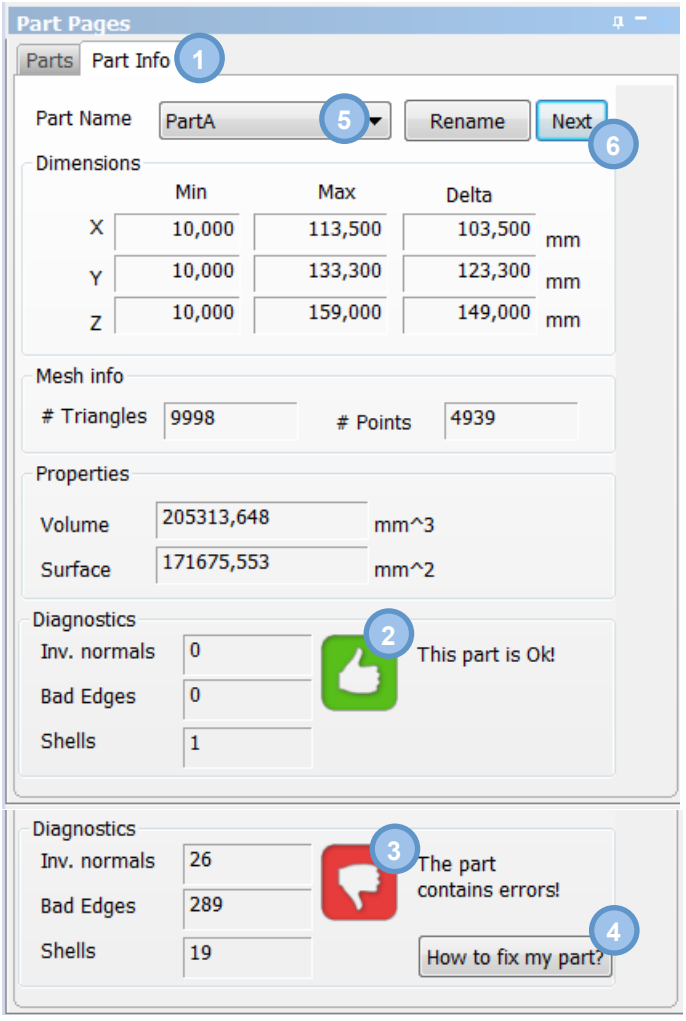
It also allows you to easily diagnose your part for errors.

Errors in STL-files can cause problems during slicing and building. Therefore you need watertight (and error-free) files. A good file contains one single Shell and zero Inverted Normals (Inv.) or Bad Edges.

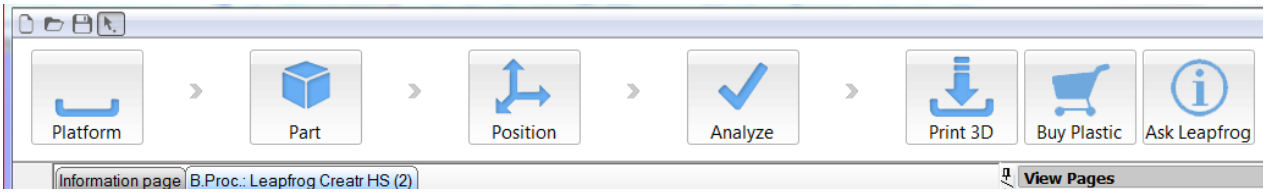
Creatr will show a green thumb up (2) when your part is ok and a red thumb down (3) when your part contains errors (and needs fixing).

The *'How to Fix my Part*?' button (4) will display additional fixing information on the built-in information webpage (internet connection required). Fixing itself is not included in Creatr.

Click the drop down arrow to choose another part (5) or click next (6).

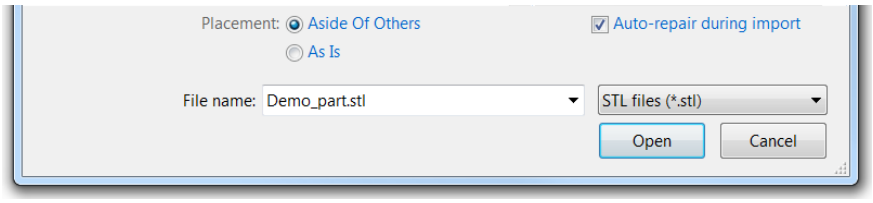


Position



The ***Position*** tools allow you to translate, rotate, rescale or duplicate your part(s).

During import, you already have the ability to automatically place the imported parts *Aside Of Others* (default option). To import parts without changing their position (i.e. to not change their coordinates), you should select *As Is*.

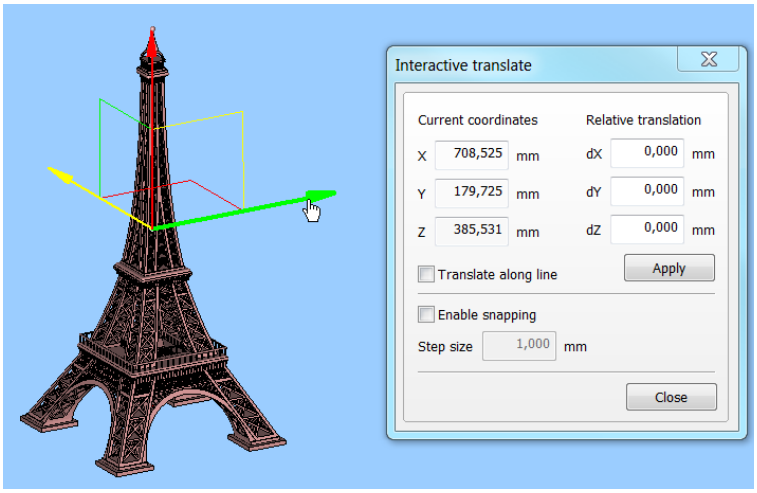


Translate | Translate

The translate operation allows you to interactively move a part (or a group of selected parts) to another position.

Grab an Axis or Cardinal Plane to move the selected part(s) in one or two dimensions while visualizing in 3D view.

You can change your selection during operation, just switch between parts (click another) or drag a window to select multiple parts at once.



Use the *Enable Snapping* checkbox to move parts in defined increments. You can specify the step size yourself. With the Interactive *Translate along line*, you can use any line on any part as translation reference.

In addition, you can specify a *Relative Translation*, fill in your desired values and press *Apply* to translate your part.

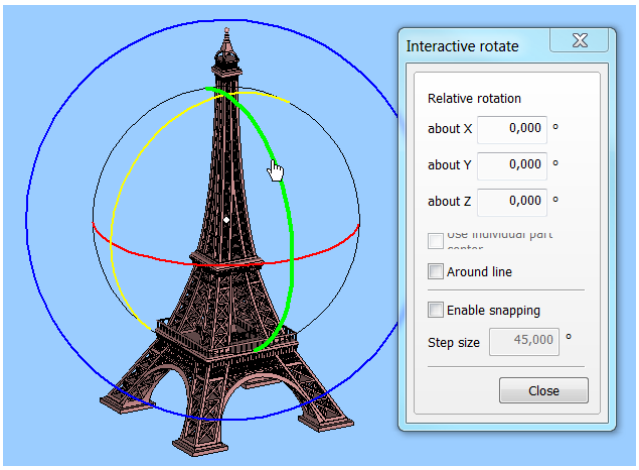
Tip: You can easily access the Translate & Rotate via the Right Mouse button Shortcut menu

Rotate | Rotate

As with Translate, grab one of the circles to interactively rotate about the chosen axis. Grab the blue circle to rotate about an axis perpendicular to the active viewpoint. You can also change your part selection during operation.

Use the *Enable Snapping* checkbox to move parts in defined increments. You can specify the step size yourself.

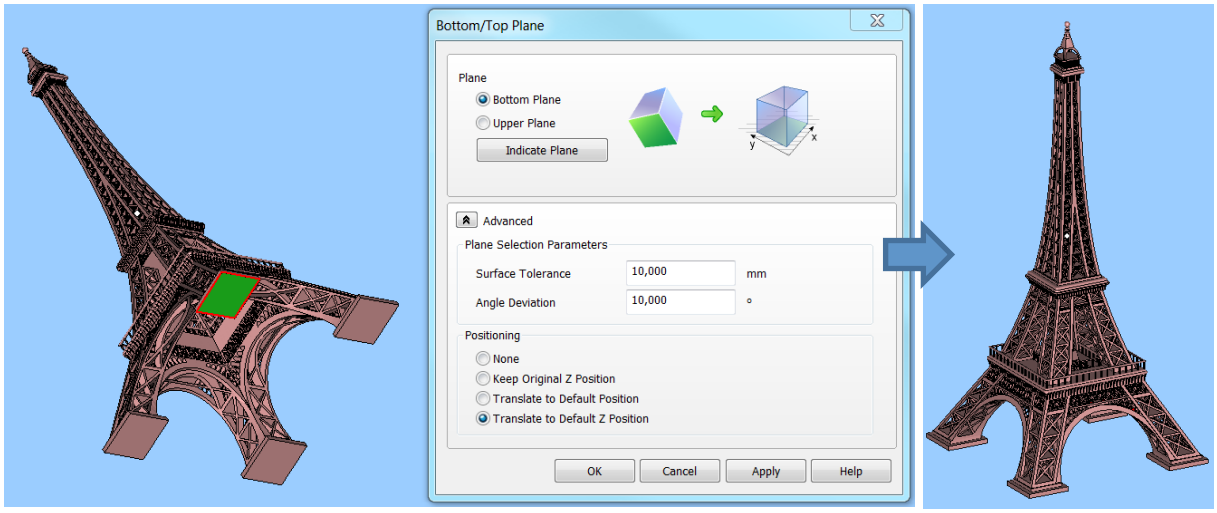
With the Interactive *Rotate around line*, you can specify any line on any part as rotation center



Tip: You can easily access the Translate & Rotate via the Right Mouse button Shortcut menu.

Bottom/Top | Bottom/Top

The Bottom/Top function allows easy orientation of the selected part by indicating a plane as the bottom/top plane. This plane will automatically be oriented parallel to the platform (i.e. the XY-plane).



Indicate Plane	Click the Indicate Plane button to select you reference plane (the selected plane is indicated in green). The selected plane will be orientated parallel to the platform facing the upper or bottom (depending on your selection).

Plane Selection Parameters

Surface Tolerance	Indicates the maximum deviation (in mm or inches) that triangle may have to be part of the same plane (that contains the selected triangle).
Angle Deviation	Indicates the maximum angle in degrees between the normals of a related triangle and the selected triangle, in order to be part of the same plane.

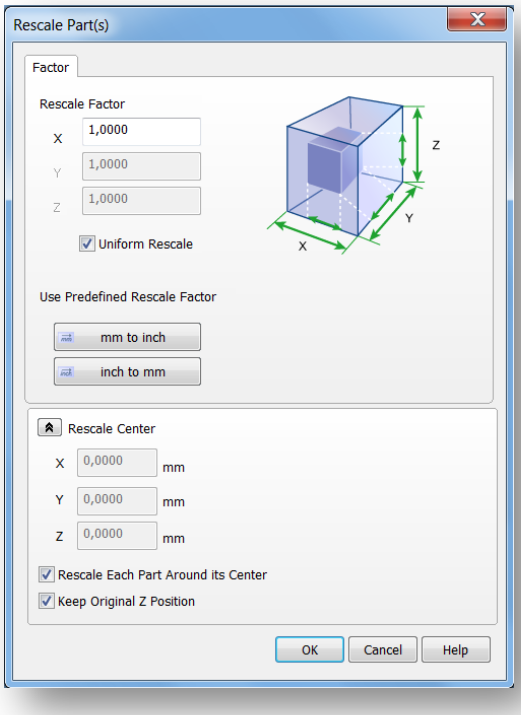
Positioning (after orientating the plane parallel to the platform)

None	No translation is performed.

Keep Original Z Position	After orientation, the part is translated along Z so that the original minimum Z position of the part remains the same.
Translate to Default Position	After orientation, the part is translated to the default part position.
Translate to Default Z position	After orientation, the part is translated along Z to the default Z position.

Rescale | Rescale

The Rescale function gives you the ability to change the dimensions of a part as a whole or in only certain specified dimensions.



The *Rescale Factor* is a multiplying value for the dimensions in that direction. When the factor is 1, no rescaling is performed, when the factor is 2, size is doubled. A factor larger than 1 will enlarge the part, a factor smaller than 1 will shrink the part.

Enable *Uniform Rescale* when you want to use an identical factor in all directions. Disable this option if you want to specify a different value in X, Y and Z.

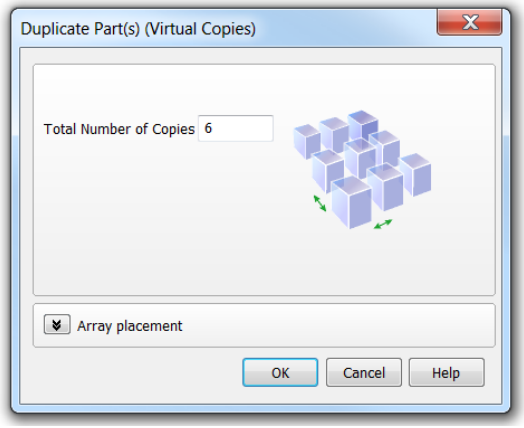
With the predefined rescale factors you can easily scale parts from mm to inches and back.

By default, rescaling is performed around the center of each part individually. *Rescale Center* allows you to define a rescale center different than the center of the WCS and enter the desired coordinates. Each part will now be rescaled around this new center. The original Z-position can be maintained.

Duplicate | Duplicate

This command automatically duplicates the selected parts. The *Total Number of Copies* you specify includes your original part.

You can also specify the *Array Placement* of the copies i.e. the *Number of Copies* you would like to have in the indicated directions and the *Spacing* or distance between each Copy.

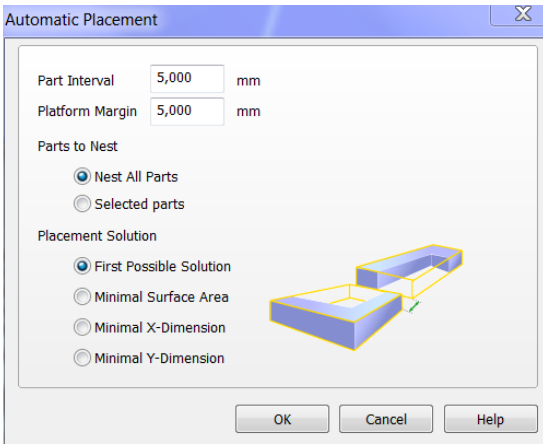


Automatic Placement | Automatic Placement

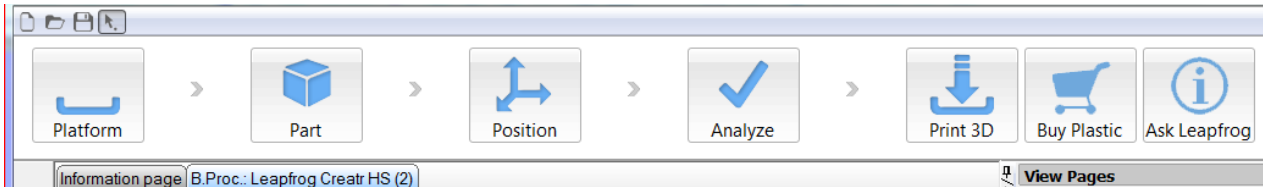
This command will automatically place parts on the build platform. Activating this function will open a dialog where the automatic placement can be setup. The part interval will define the space between the parts when placing the parts automatically. The platform margin will indicate how far the parts need to be placed from the borders of the platform.

The parts to nest selection will give the user the possibility to select all parts or just the selected ones.

The placement solution selection allows the user to define a placement strategy

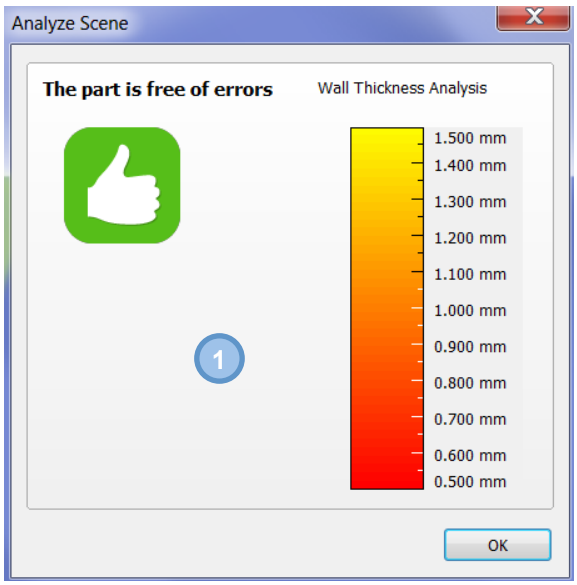


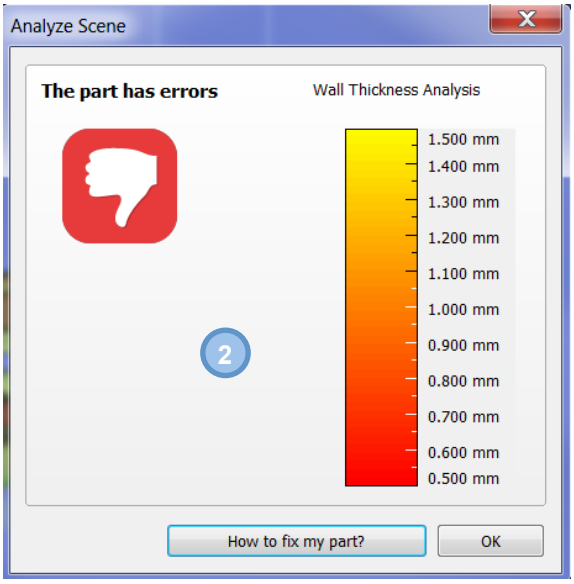
Analyze



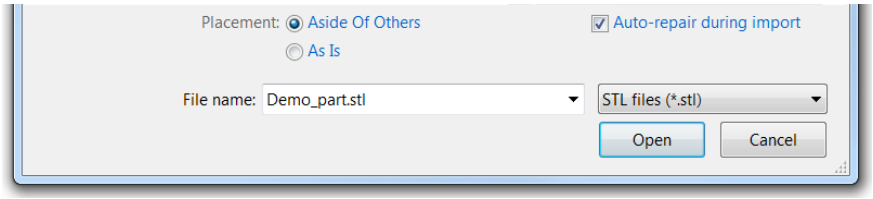
The *Analyze Scene* function allows you to easily diagnose all parts on the active scene for errors. This function will show a green thumb-up when all parts are ready to build (1) and a red thumb down when some of your parts contain errors and need fixing (2). It will also give the user information about the thickness of the walls in the parts on the build platform. The information is given with color codes that indicate ticker of thinner walls by colors. The meaning of the color is indicated in a graph in the analyze window.

You can easily diagnose all parts at once with the *Analyze Scene function*, individual part diagnostics can be performed on the *Part Info tool sheet*.

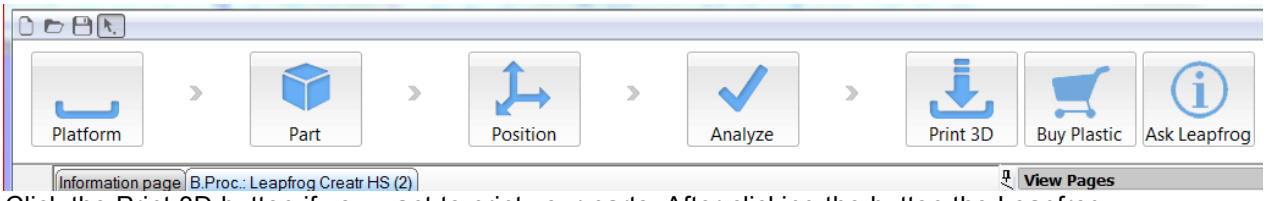




During import, you have the ability to perform an *Auto-Repair* (enabled by default).This algorithm will automatically fix some very basic STL-errors (without changing the geometry).



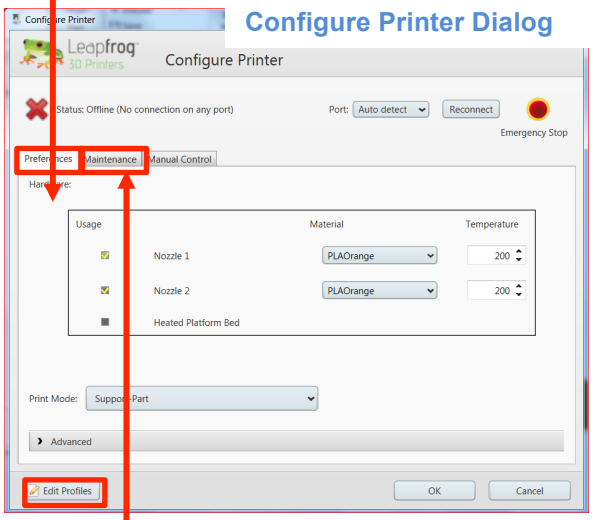
Leapfrog Build Processor

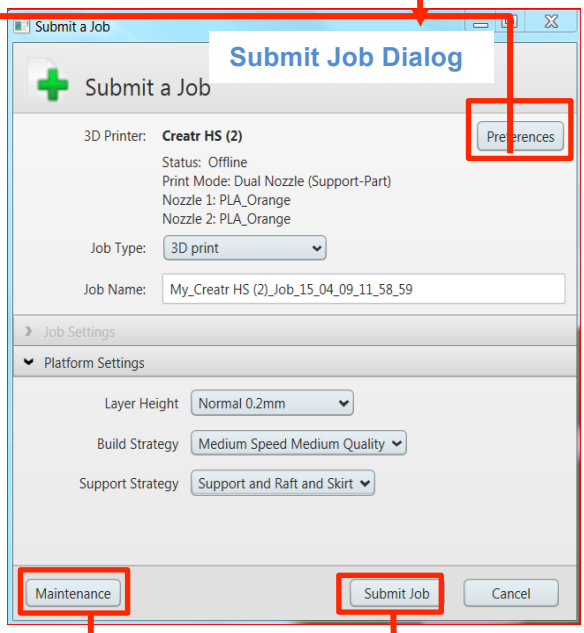


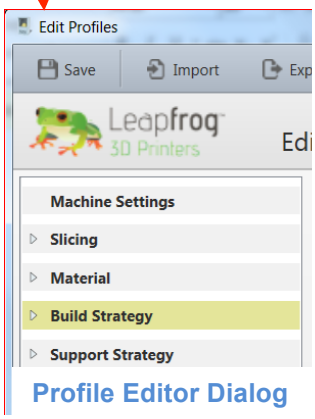
Click the Print 3D button if you want to print your parts. After clicking the button the Leapfrog build processor dialog will appear. This will enable you to setup the Leapfrog build processor and generate a build file for your printer or output directly to the printer.

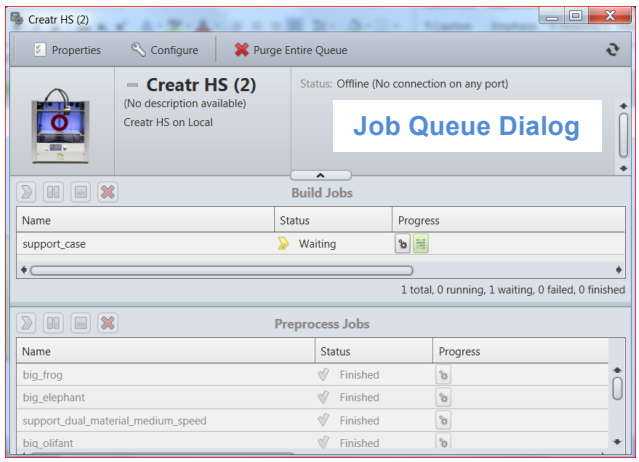
Dialog Relations

3D Print dialogs

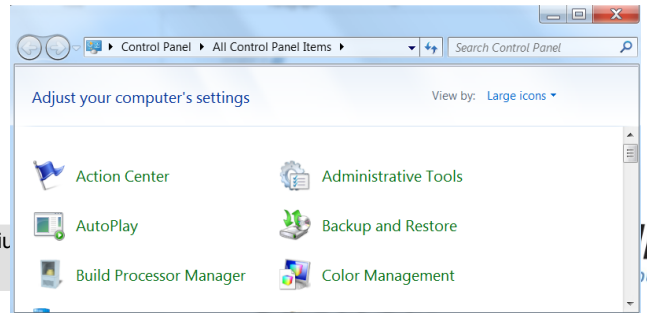


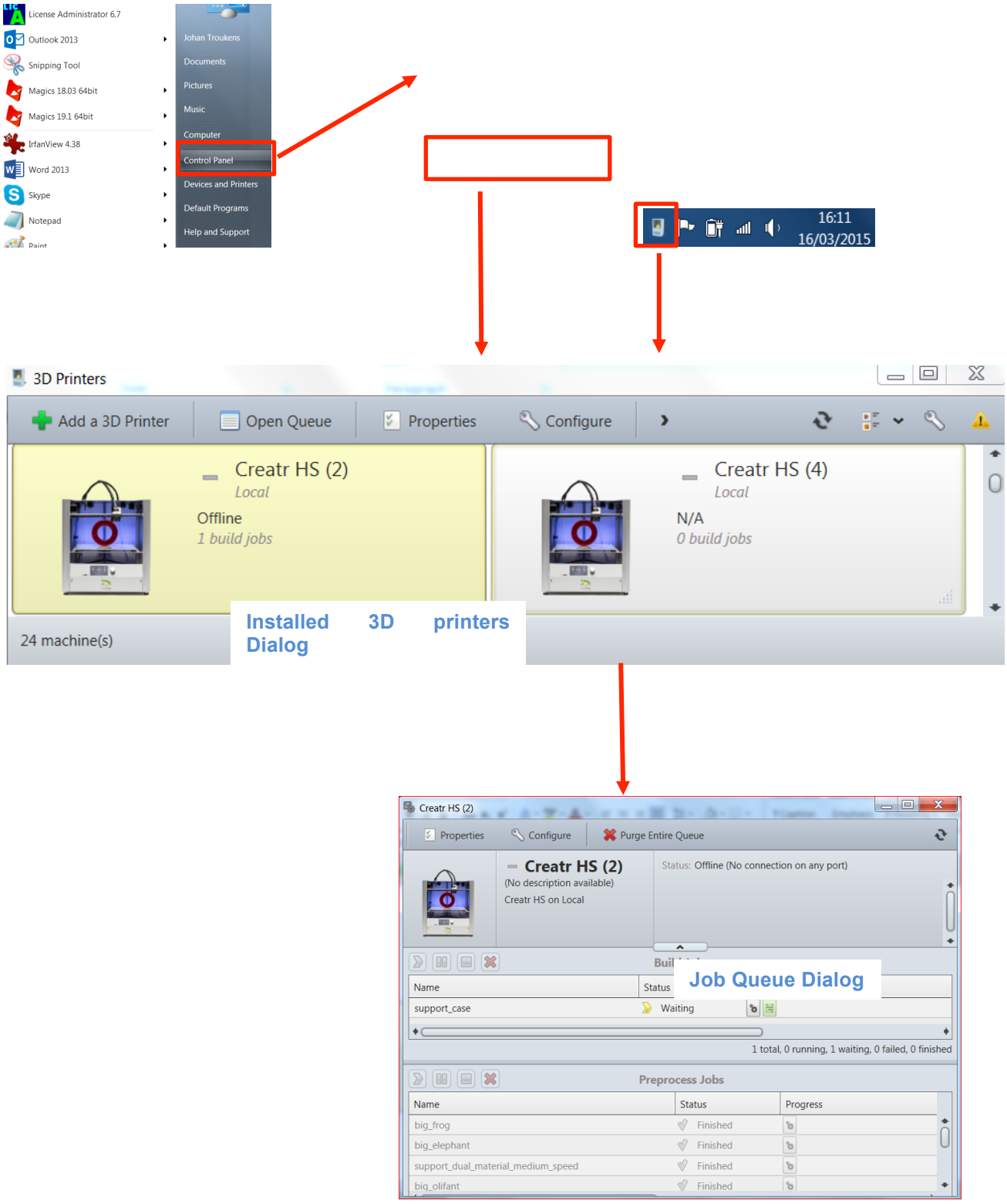




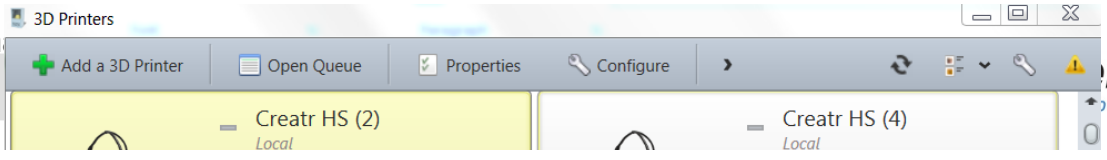


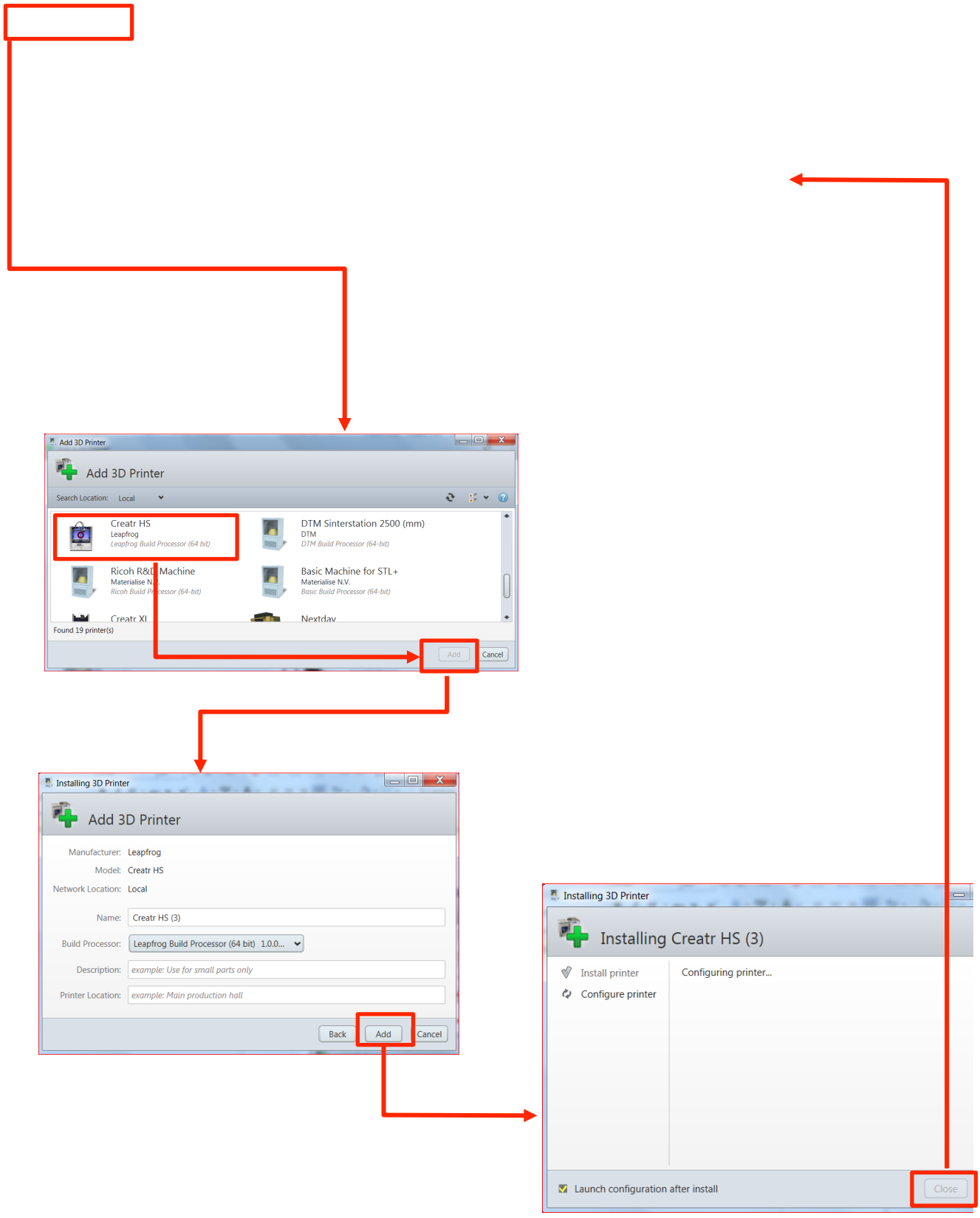
Build processor Manager Dialogs





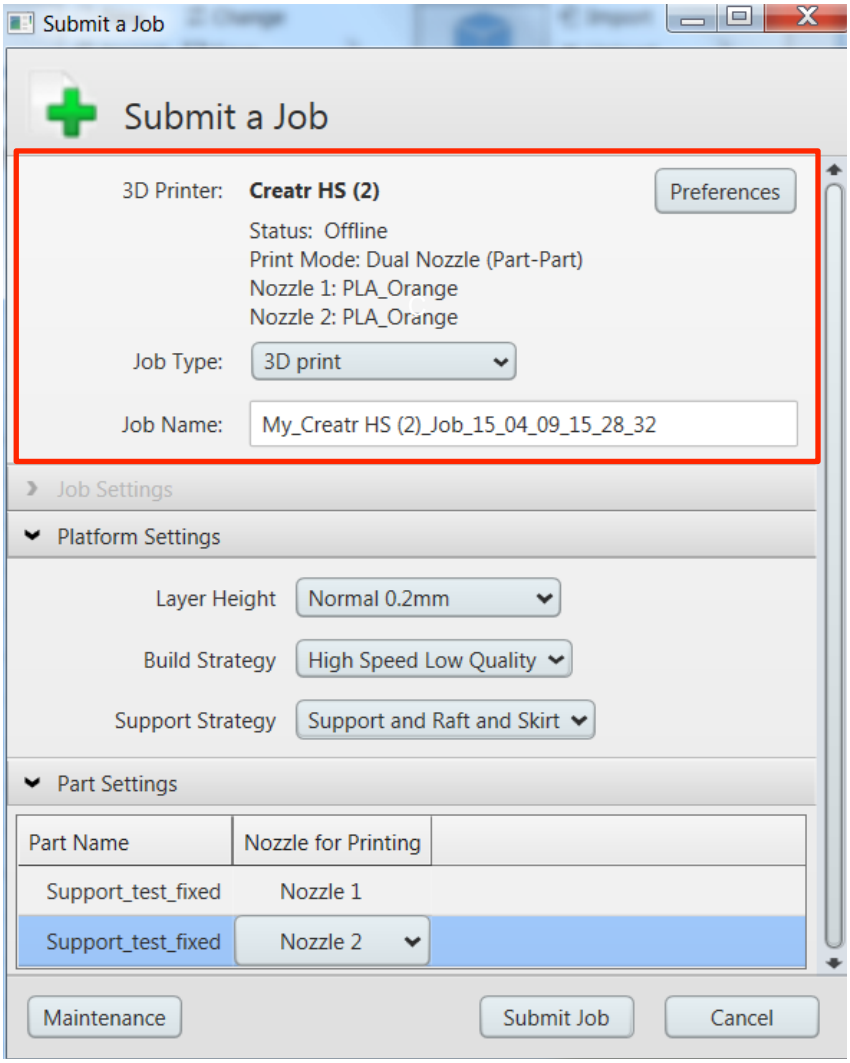
Add 3D printer Dialogs





Submit Job dialog

Print & Printer Settings



The Print & Printer settings section provided the user with information about:

- ***The printer type:*** here the user can see which printer is supported by the build processor
- ***The status of the printer:*** here the user can see if the USB connection with the printer is active
- ***The selected print mode:*** here the user can see which print mode is selected in the configure printer dialog
- ***The material loaded on the nozzles:*** here the user can see which material is linked to a certain nozzle in the configure printer dialog

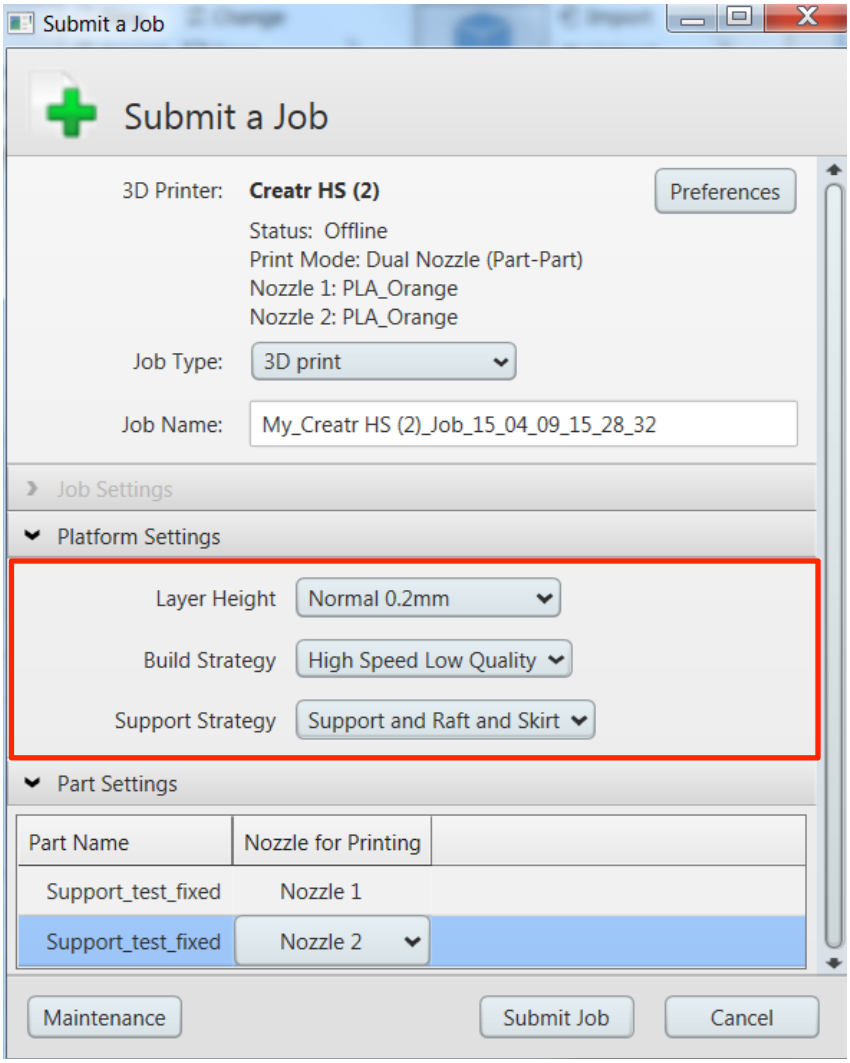
And allows the user to set:

- ***Job type:*** here the user can make a selection between 'Print to file' or 'save to folder'
- ***Job Name:*** here the user can set the folder name where the output will be stored (Print to file) or the job name used in the queue dialog (print)
- ***Output directory:*** here the user can define the folder where the output will be stored.

And allows the user to navigate to:

- ***Preferences:*** here the user can set the material loaded on the nozzles and the print mode that will be used to process the part(s).

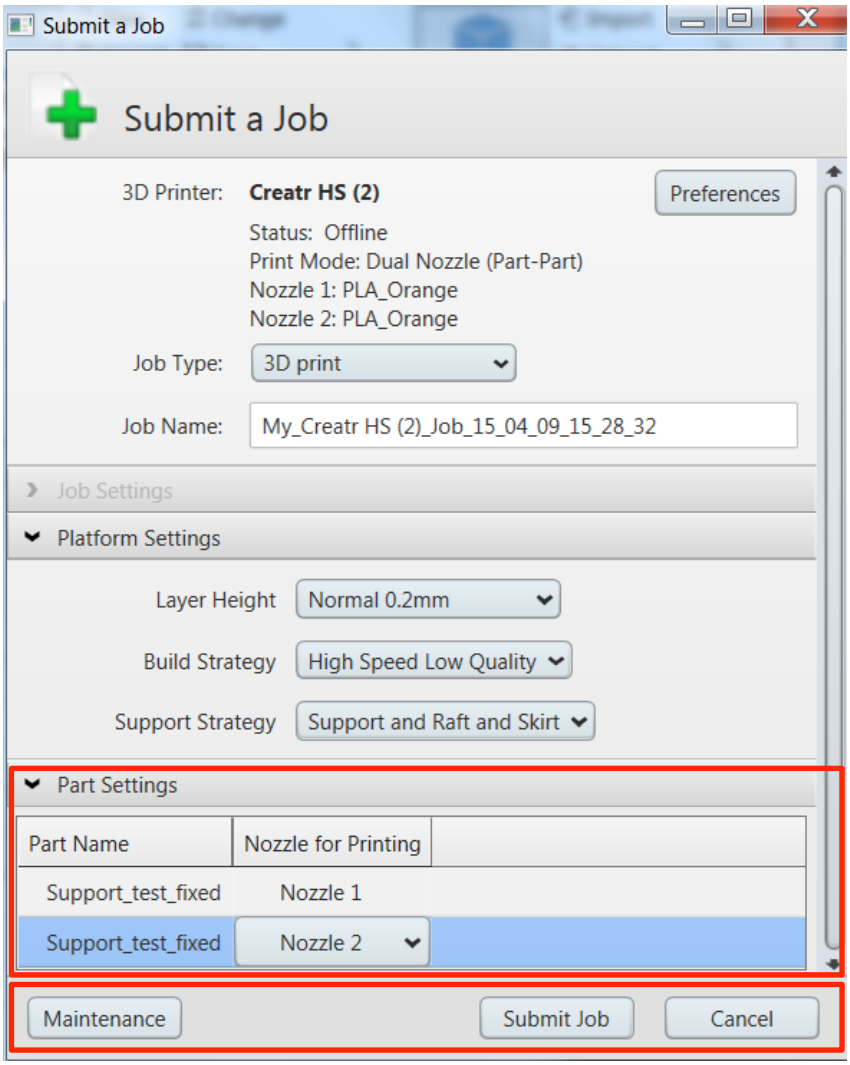
Platform setting



Here the user can select which predefined profiles will be used to slice the part(s). These profiles are defined in the profile editor. The selection is defined in 3 drop down boxes:

- ***Layer height:*** here the user can select the predefined slicing profiles.
- ***Build strategy:*** here the user can select the predefined build strategy profiles.
- ***Support strategy:*** here the user can select the predefined support strategy profiles.

Part settings



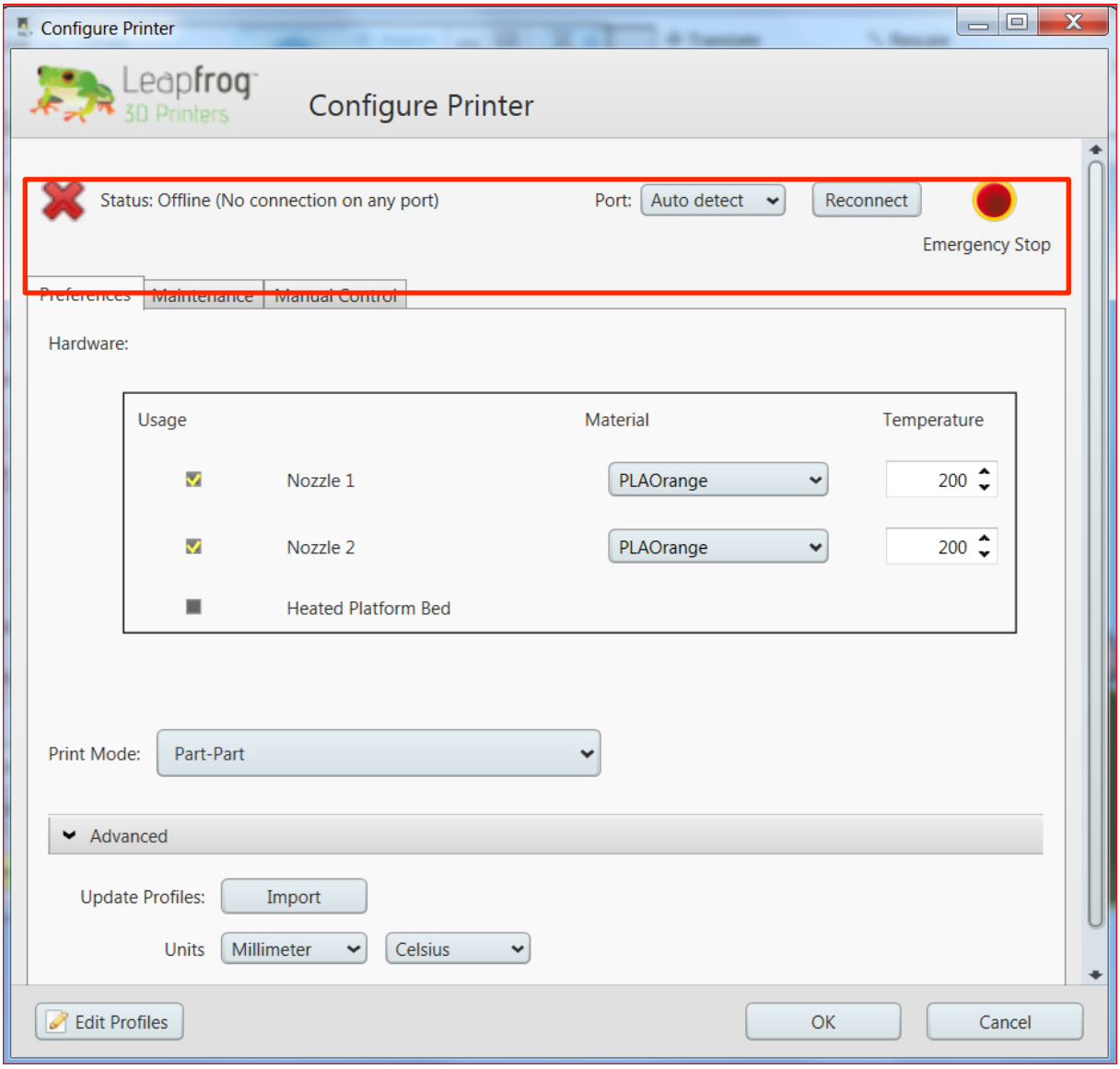
The part settings section only shows in the part-part print mode. Here the user can select with which nozzle a part will be printed. The part settings list will show all available parts on the build platform together with the nozzle that is selected for printing. By default all parts will be printed by nozzle 1. The user has the possibility to select for each part which nozzle will be linked with the part. If the parts need supports the support will be printed by default with the first nozzle.

Controls

Maintenance: here the user can navigate to the configure printer dialog.
Submit job: here the user can activate the build processor and slice the platform.
Cancel: here the user can exit the submit job dialog without any action.

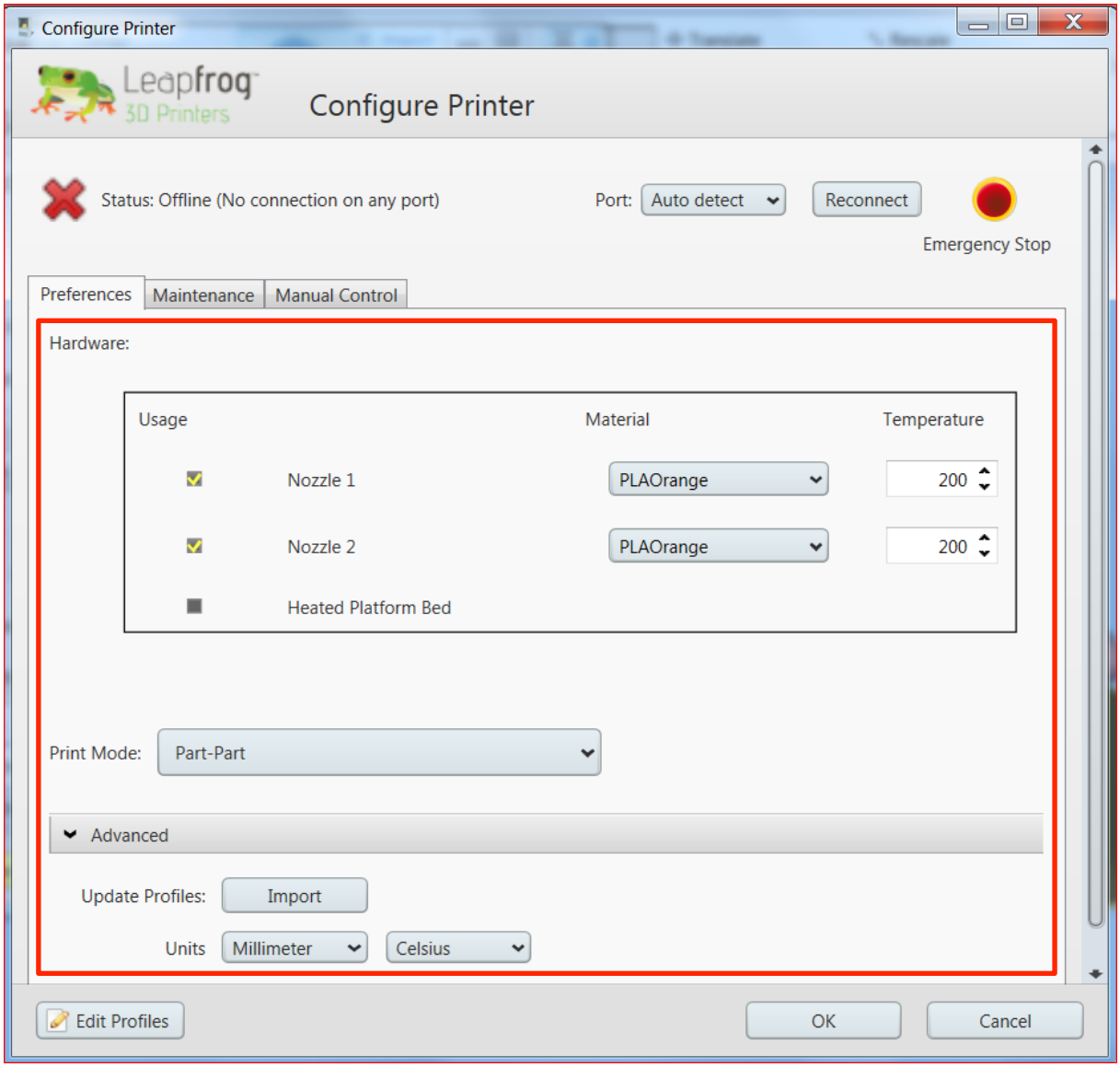
Configure Printer Dialog

Communication control



- ***Status:*** here the user can see what the status is off the communication with the machine
- ***Part:*** here the user can set which communication port on the PC will be used for communication with the printer.
- ***Reconnect:*** here the user can initiate a connection with the printer
- ***Emergency stop:*** here the user can execute an emergency stop of the printer when the printer is connected over the communication port.

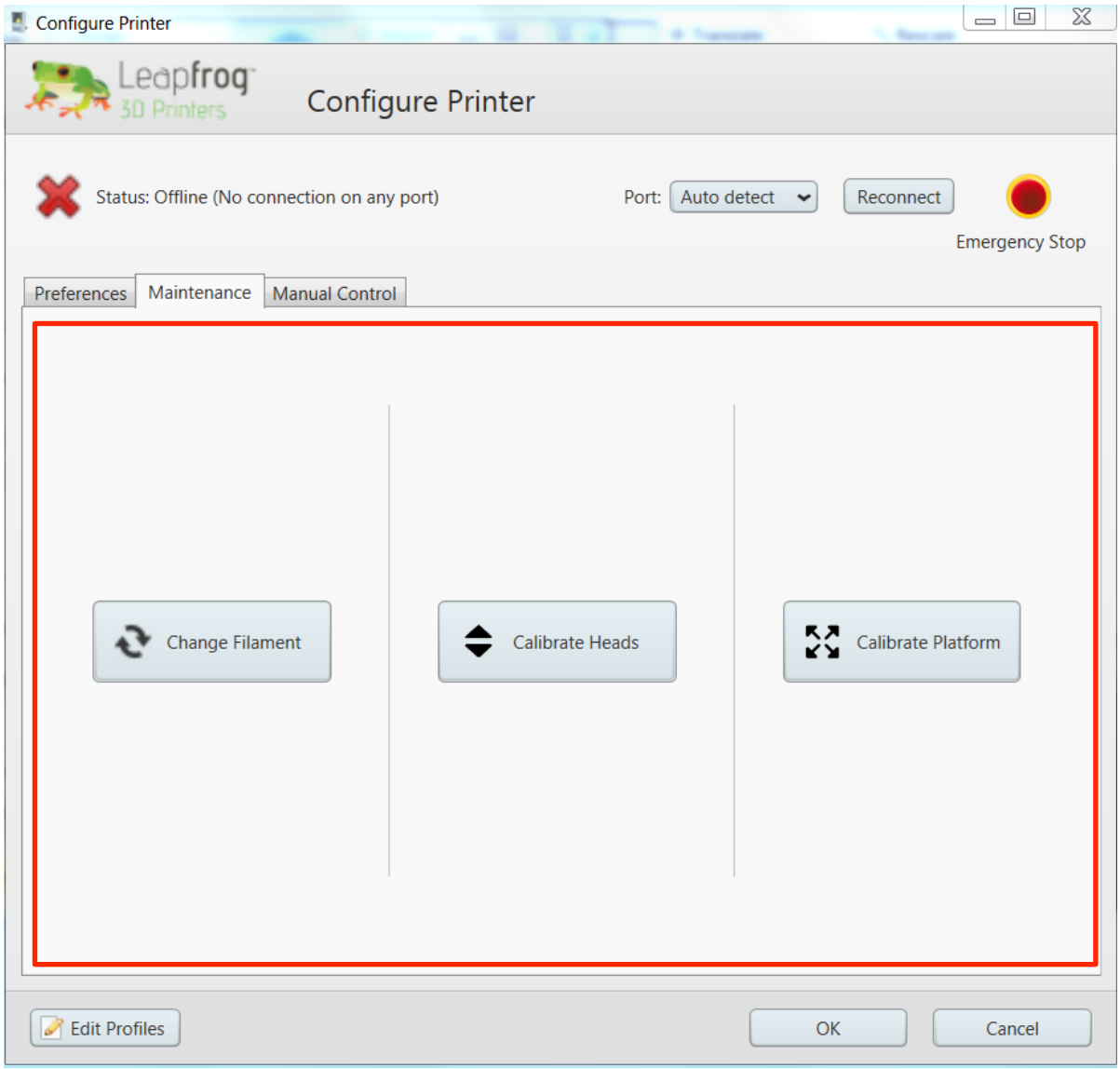
Preferences



Here the user can setup less frequently changing settings of the printer configuration like:

- ***Nozzle usage:*** here the user can select which nozzle will be used on the printer.
- ***Material loaded on a nozzle:*** here the user can set the material linked to the nozzle.
- ***Processing temperature override:*** here the user can override the material temperature that will be used for processing of the material
- ***Print mode:*** here the user can set which print mode will be used. The user can make a selection between:
    - Part-Part
    - Part-support & Support-Part
    - Infill-contour & Contour-Infill

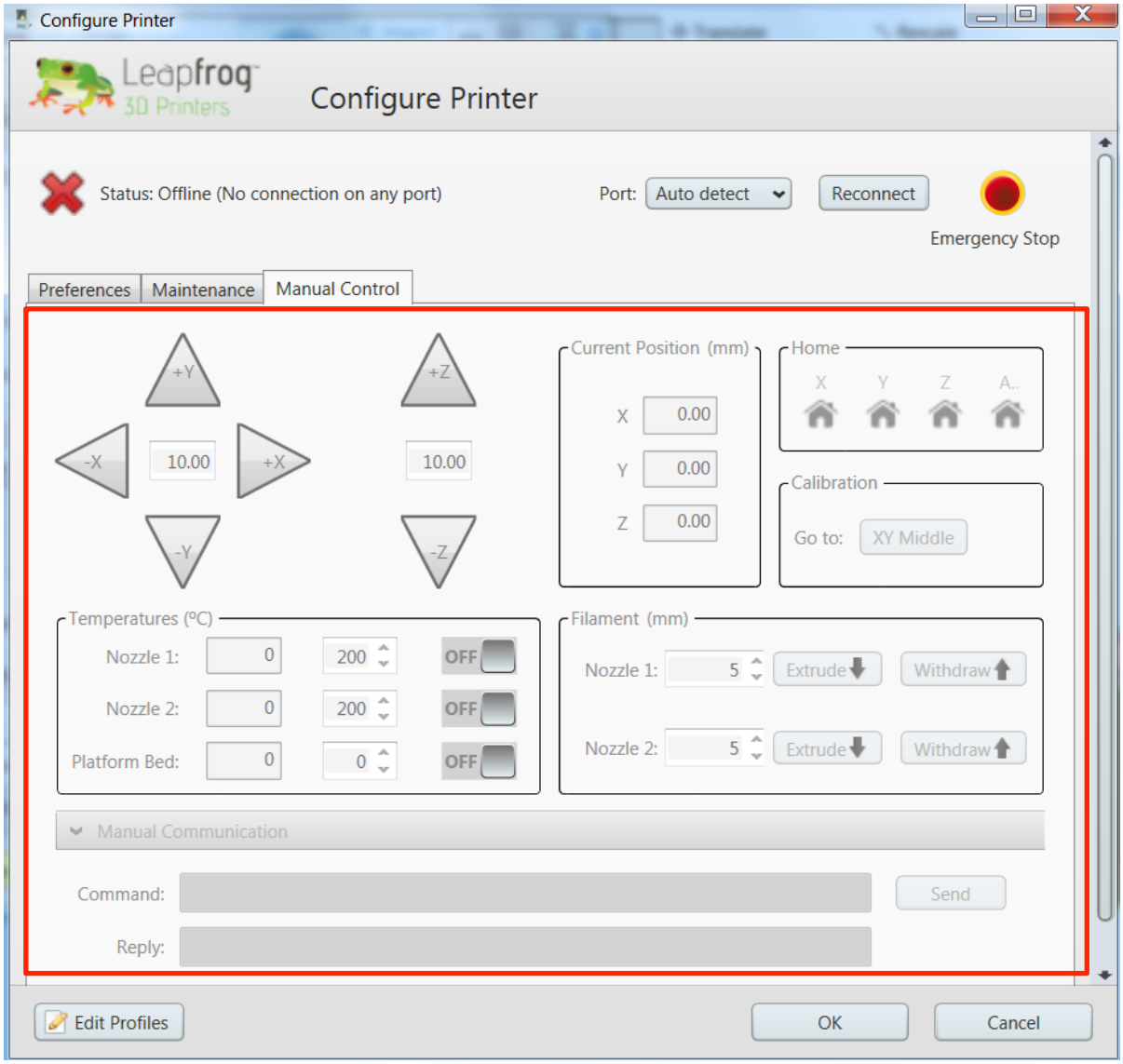
Maintenance



Here the user can make a selection between several maintenance functions like:

- ***Change filament:*** here the user can activate a function to load a filament on an extruder and a function to unload a filament on an extruder.
- ***Calibrate heads:*** here the user can activate a function to calibrate the firmware for dual nozzle printing.
- ***Calibrate platform:*** here the user can activate a function to aid in adjusting the leveling screws of the platform.

Manual control

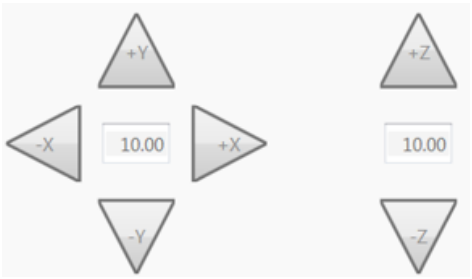


Here the user gets information about the most important values on the printer like nozzle temperature and nozzle position and can control all main functions of the printer manually.

Note: The use of the manual functions is only possible when the software is connected with the printer through the communication control. When no connection is available all controls will be grayed out.

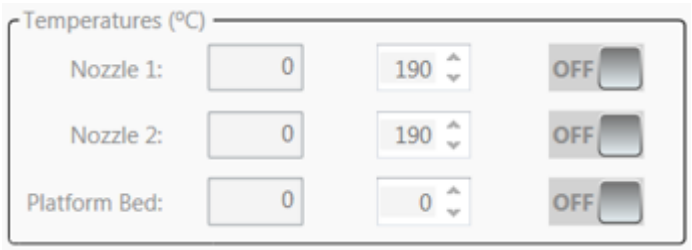
Positioning Control

This control allows the user to manually control the position of the print head and the platform. By using the arrow +X –X +Y –Y the user can move the print head in the X&Y direction. By using the Z+ Z- arrows the user can move the platform up and down. The number boxes allow the user to set the step size of the motion that will be used for each click on one of the arrow buttons.



Temperature control

The control allows the user to manually control the heaters of the nozzles (On/Off and set temperature) and gives feedback on the temperature of the nozzles.

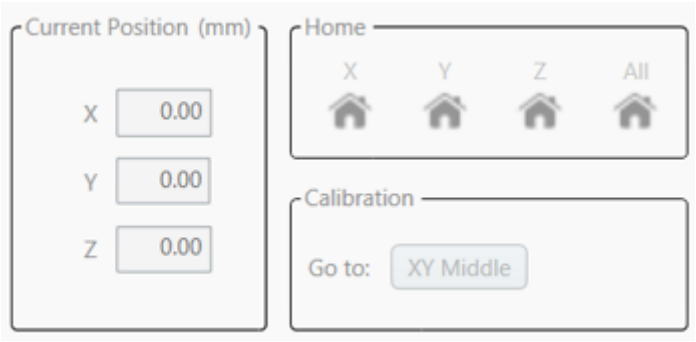


Extruder control

The control allows the user to manually control the extrusion steppers for both nozzles. In the textbox the user cans set the step size of the motion and with the buttons extrude and withdraw the user can activate the motion in both directions.

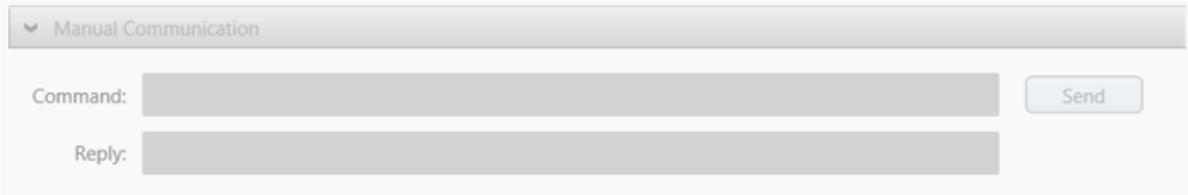
Position Control

Here the user gets feedback of the actually position of the print head and allows the user to perform homing actions.



Manual communication control

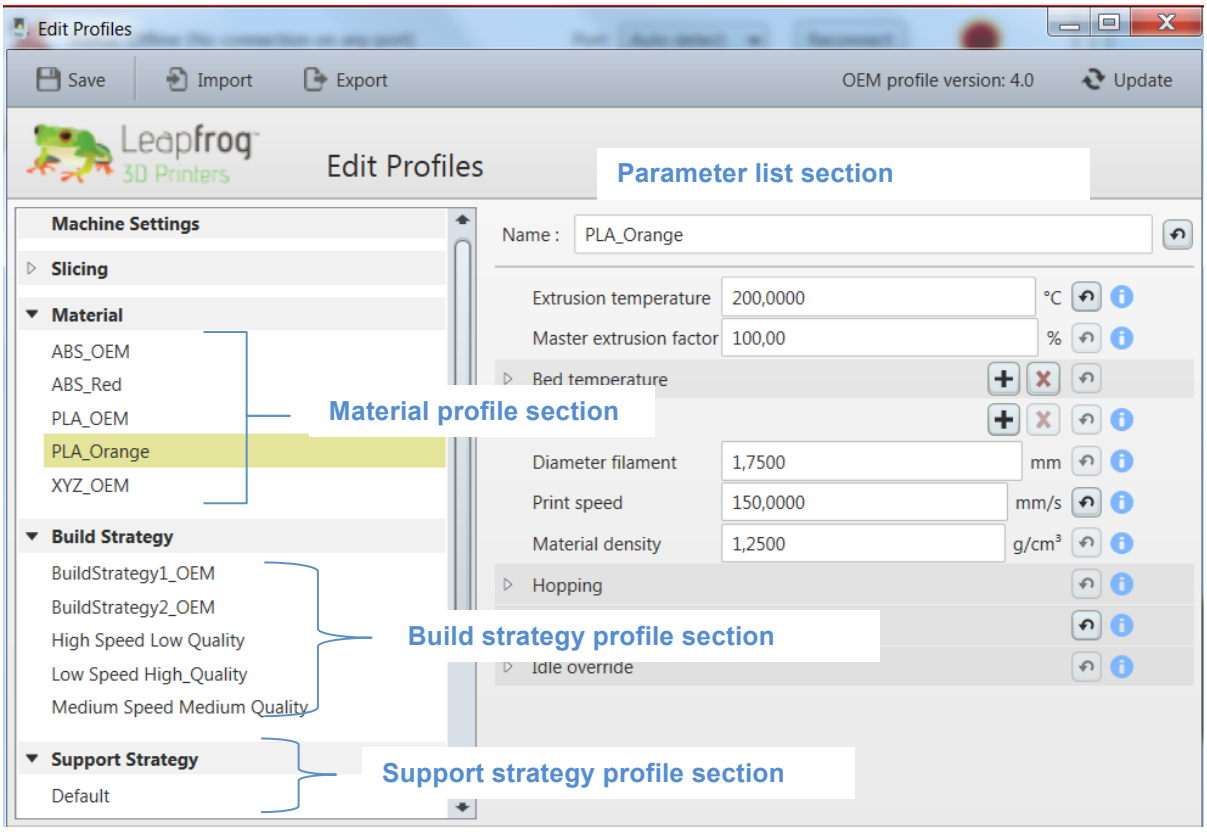
Here the user can send lines of G-code to the printer and monitor the reply of the printer.



Profile editor Dialog

The profile editor allows the user to setup and manage the print and printer parameters. These parameters are grouped into logical sections called profiles. Each profile has a

parameter list attached to it that allow to make settings to the way the build processor behaves.



General behavior

This button will allow the user to make a copy of the profile that is select or it will allow the user to add an additional parameter in the parameter list section

This button will allow the user to delete the profile that is selected

This button will indicate to the user that a certain parameter in the profile has errors

This button will allow the user to reset the parameter to the default value

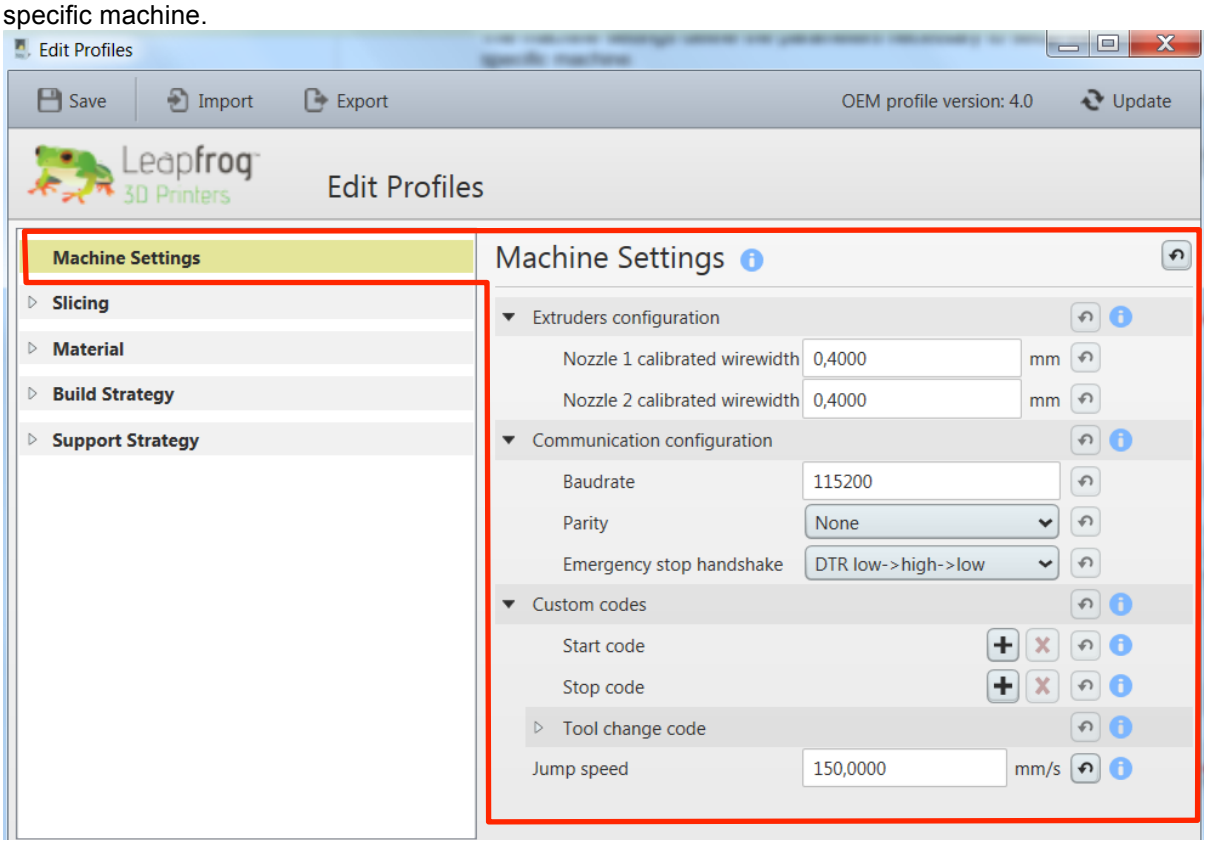
This button will give the user additional info about the parameters it stands beside.

- The save button will allow the user to save al profiles in the profile editor.

- The import button will allow the user to import 1 or more profiles into the profile editor.
- The export button will allow the user to export 1 or more profile out of the profile editor
- The update button will allow the user to download predefined profiles from the manufacturer's server. Be aware that your computer needs to have a working connection to the internet to update your profiles.

Machine settings

The machine settings define the parameters necessary to setup the software to work with a specific machine.



Extruder configuration
Here the user can define the nozzle diameters on his machine.

- ***Nozzle 1 calibrated wire width:*** sets the diameter of the first nozzle wire on your machine
- ***Nozzle 2 calibrated wire width:*** sets the diameter of the second nozzle wire on your machine

Note: For nozzle position, count from your right when standing in front of the machine

Communication configuration
Here the user can define the USB communication with the machine.

- ***Baud rate:*** sets the baud rate of the serial USB communication. By default this is set to 115200 baud for the Leapfrog printers

- ***Parity:*** sets the parity of the serial USB communication. By default this is set to none
- ***Emergency stop handshake:*** sets the sequence of handshake signals that need to be send to the printer to set it in emergency stop mode. By default this is set to DTR low → high → low

Custom codes
Here the user can insert custom define g-code commands into the output to change the behavior during special events of the build process. Those special events are:

- During the start of a build → start code
- During the end of a build → stop code
- During the change of a tool → before tool change code & after tool change code

Start code: Here the user can insert additional g-code commands that will be executed during the startup of a build

Stop code: Here the user can insert additional g-code commands that will be executed during the end of a build.

Before tool change code: here the user can insert additional g-code commands that will be executed before a tool change but after the build for that tool is finished

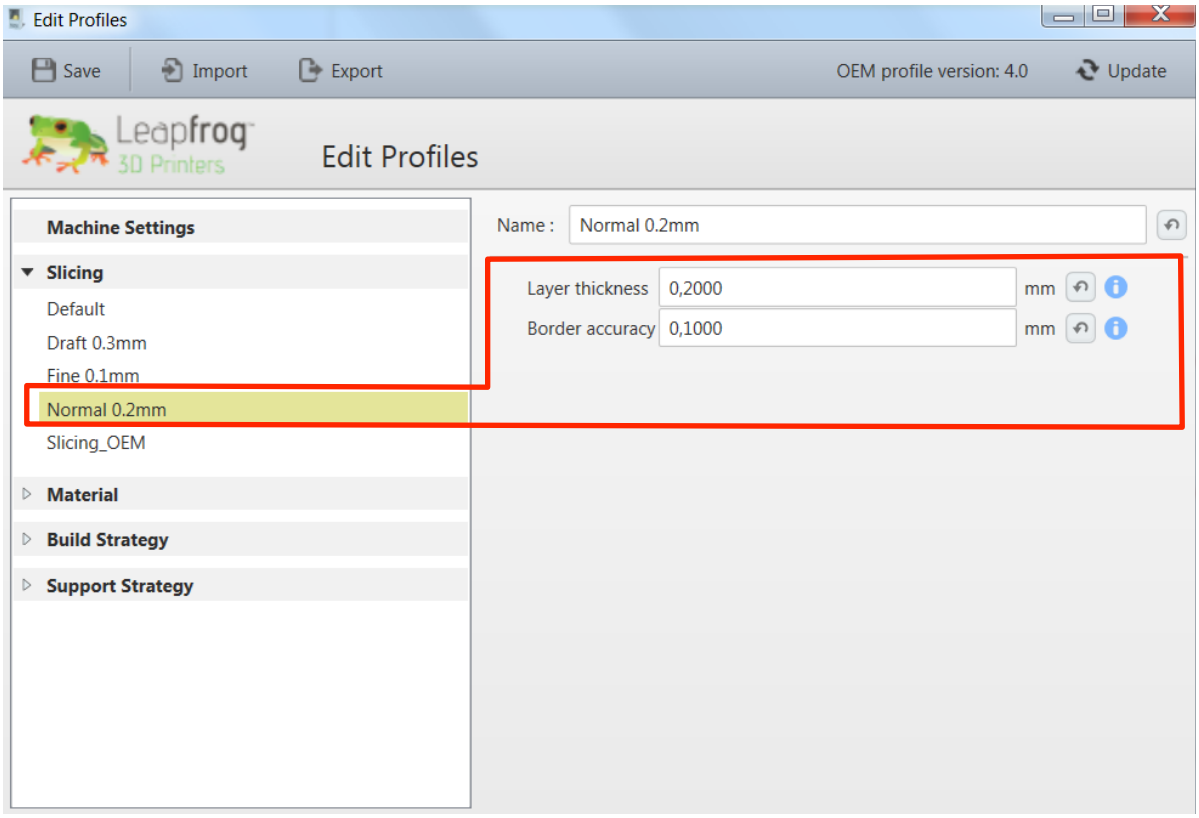
After tool change code: here the user can insert additional g-code commands that will be executed after a tool change but before the resume of the build for that tool.

Note: the build processor provide variables that can be used into the custom start and stop codes.

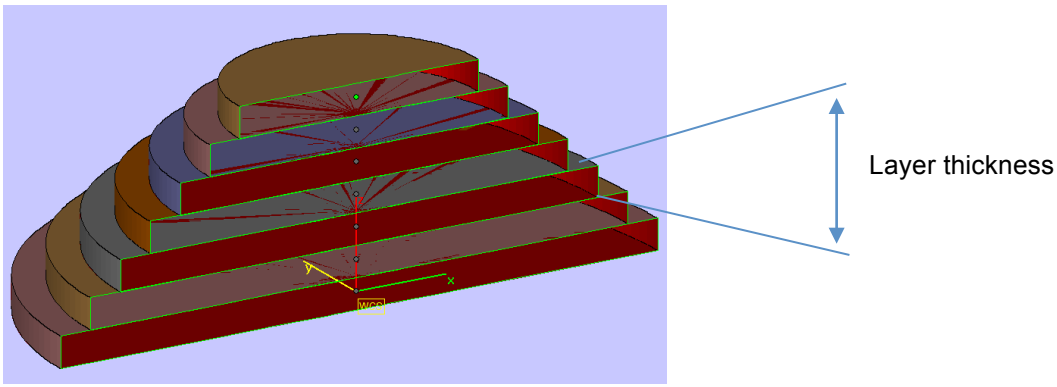
- ***%%Zstart%%:*** will give information about the start Z-level
- ***%%TemperatureNozzle1%%:*** will give a value corresponding with the set temperature for nozzle 1 like set in the corresponding profile
- ***%%temperatureNozzle2%%:*** will give a value corresponding with the set temperature for nozzle 2 like set in the corresponding profile
- ***%%temperaturebed%%:*** will give a value corresponding with the set temperature for the bed like set in the corresponding profile.

Slicing

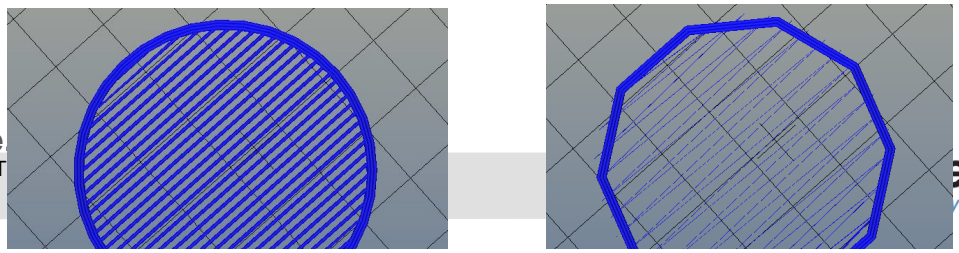
The slice profile section will allow the user to edit, manage and define the profiles that influence the slicing behavior of the build processor.



- ***Layer thickness:*** defines the thickness of the slicing process in mm



- ***Border accuracy:*** defines the maximum deviation in mm a toolpath is allowed to have towards the real toolpath. The higher the border accuracy the more deviation a toolpath is allowed to have and the more reduction of the amount of describing points we will have on curved paths. The lower the border accuracy the fewer deviation is allowed towards the real toolpath and the more describing points we will have in
curved paths.

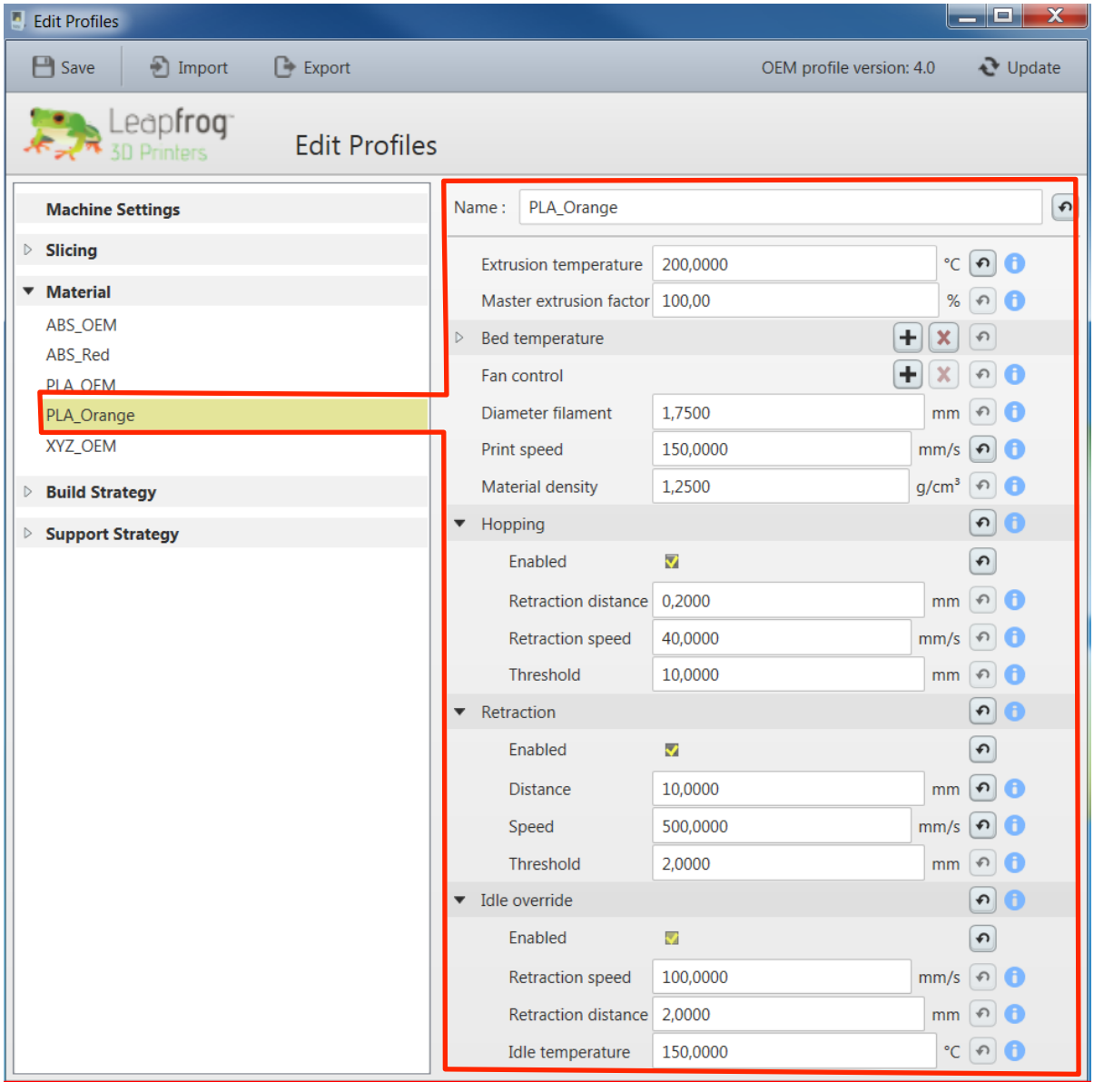


Border accuracy = 0.1

Border accuracy = 2

Material

The material profile section will allow the user to edit, manage and define the profiles that define a material filament used for building a part.



Name: here the user can set the name of the material profile the parameter list corresponds to.

Extrusion temperature: here the user can set the temperature the nozzle needs to have to process the filament

Bed temperature: here the user can set the temperature of the bed necessary to process the filament

Diameter filament: here the user can set the diameter of the filament.

Print speed: here the user can set the nominal speed at which the filament will be printed

Material density: here the user can set the density of the filament in order to calculate the consumed material during a print

Hopping

Enabled: with this checkbox the user can enable hopping during printing

Distance: here the user can set the retraction distance when hopping

Speed: here the user can set the speed of retraction when hopping

Threshold: here the user can set the threshold at which hopping will occur. When a jump is larger than the threshold hopping will occur when it is lower than the threshold the jump will be executed in the normal way.

Retraction

Enabled: with this checkbox the user can enable retraction during printing

Distance: here the user can set the retraction distance. This is the distance the extruder will pull back the filament out of the heating chamber to avoid oozing of the nozzle.

Speed: here the user can set the speed of extruder stepper during retraction.

Threshold: here the user can set the threshold at which retraction will occur during printing. When a print vector is larger than the threshold retraction will occur when it is lower than the threshold no retraction will occur

Idle override

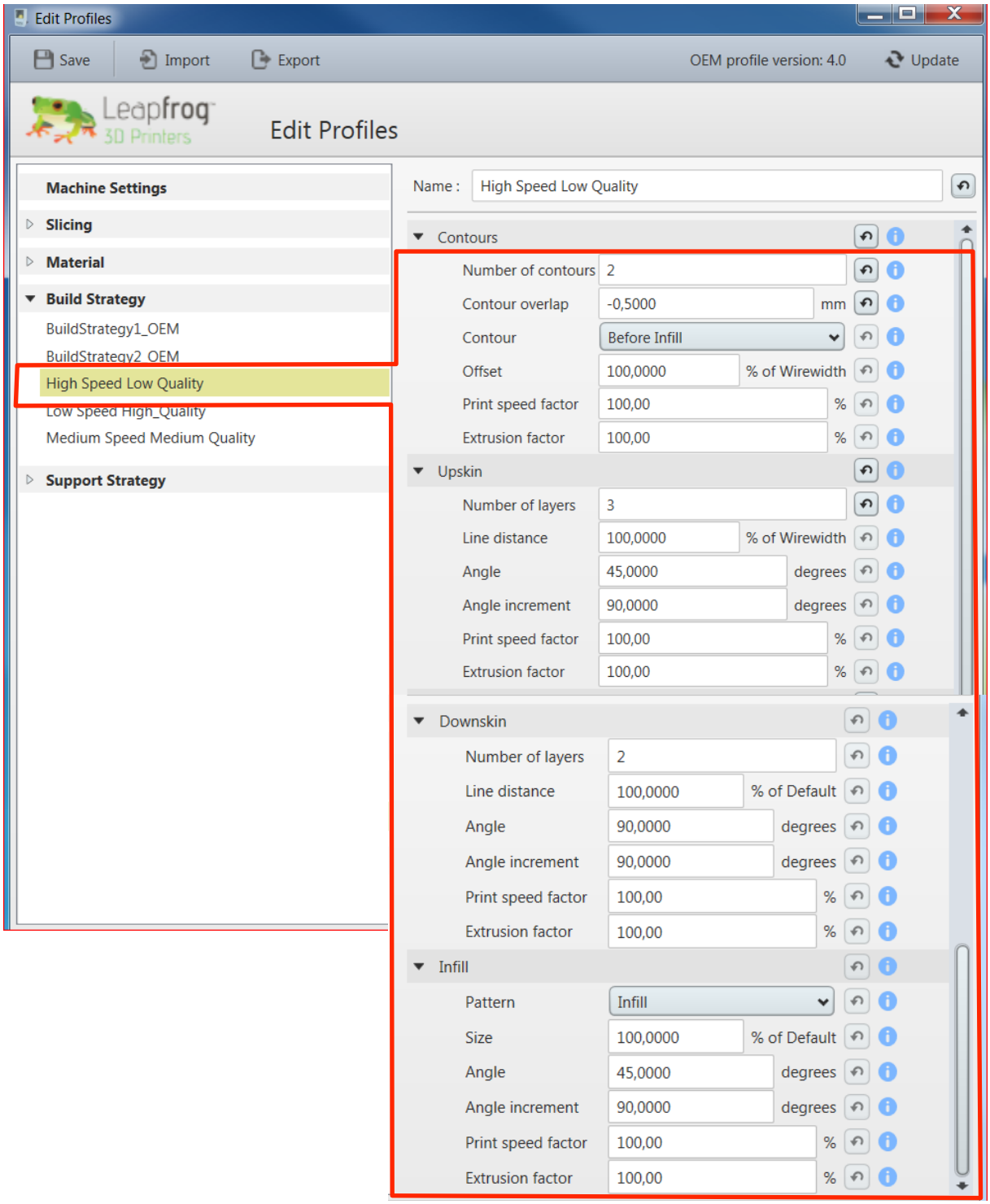
Enabled: this checkbox will enable to place a nozzle in the idle state when it becomes idle in dual nozzle printing.

Retraction speed: here the user can set the speed of retraction when a nozzle goes into idle state.

Retraction distance: here the user can set the distance of retraction when the nozzle goes into idle state.

Idle temperature: here the user can set the temperature of the nozzle when it goes into idle state.

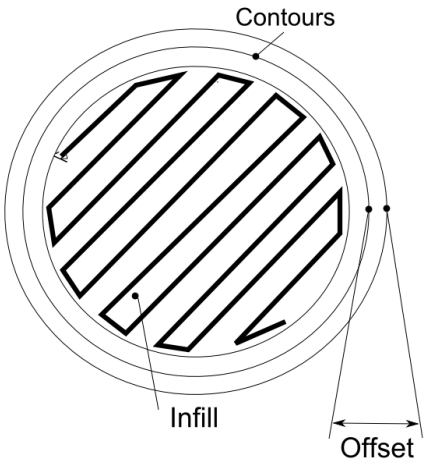
Build strategy

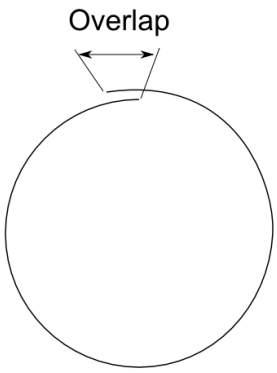


Name: here the user can set the name for the build strategy profile

Contours

Number of contours: here the user can set the number of contours that will be used to build up the model.





Contour overlap: here the user can set the amount of overlap a contour can have when it closes.

Contour: with this drop down box the user can select the order in which contours and infill will be processed.

Offset: here the user can set the distance between the real toolpath and other contours in a % of the default wire width (0.4 mm)

Print speed factor: here the user can set the speed at which the contour needs to be processed as a % of the nominal speed defined in the material profile.

Extrusion factor: here the user can set the amount of extrusion as a % of the master extrusion rate defined in material profile.

Up skin / down skin

Number of layers: here the user can set the number of layers that will be printed when an area is classified as an up skin.

Line distance: here the user can set the distance between the infill lines.

Angle: here the user can set the angle at which the infill will be done.

Angle increment: here the user can set the angle increment that will be used when printing consecutive layers.

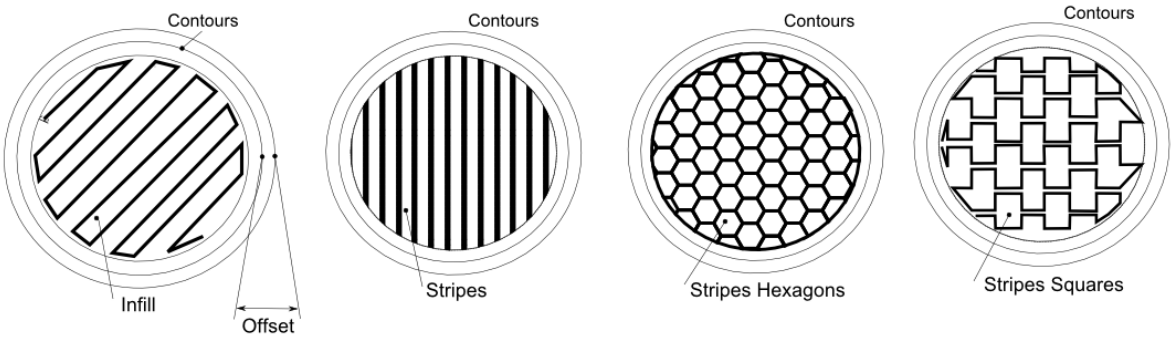
Print speed factor: here the user can set the speed at which the up skin / down skin will be processed as a % of the nominal speed defined in the material profile.

Extrusion factor: here the user can set the amount of extrusion as a % of the master extrusion rate defined in material profile.

Infill

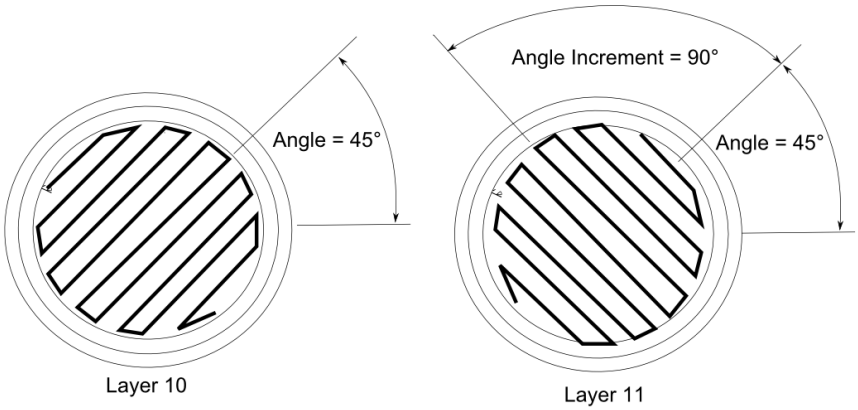
Pattern: here the user can set the pattern that will be used for processing the infill area. There are 4 different patterns that can be used for infill:

- Infill: this is a line filling pattern where we can define the density of the line fill.
- Stripes: this is a line pattern with a fixed space between the lines.
- Stripes Hexagons : this is a hexagon pattern
- Striper Squares : this is a square wave pattern



Size: here the user can set the size of the infill pattern as a percentage of the default size of the pattern

Angle: here the user can set the angle at which the infill pattern will be printed.

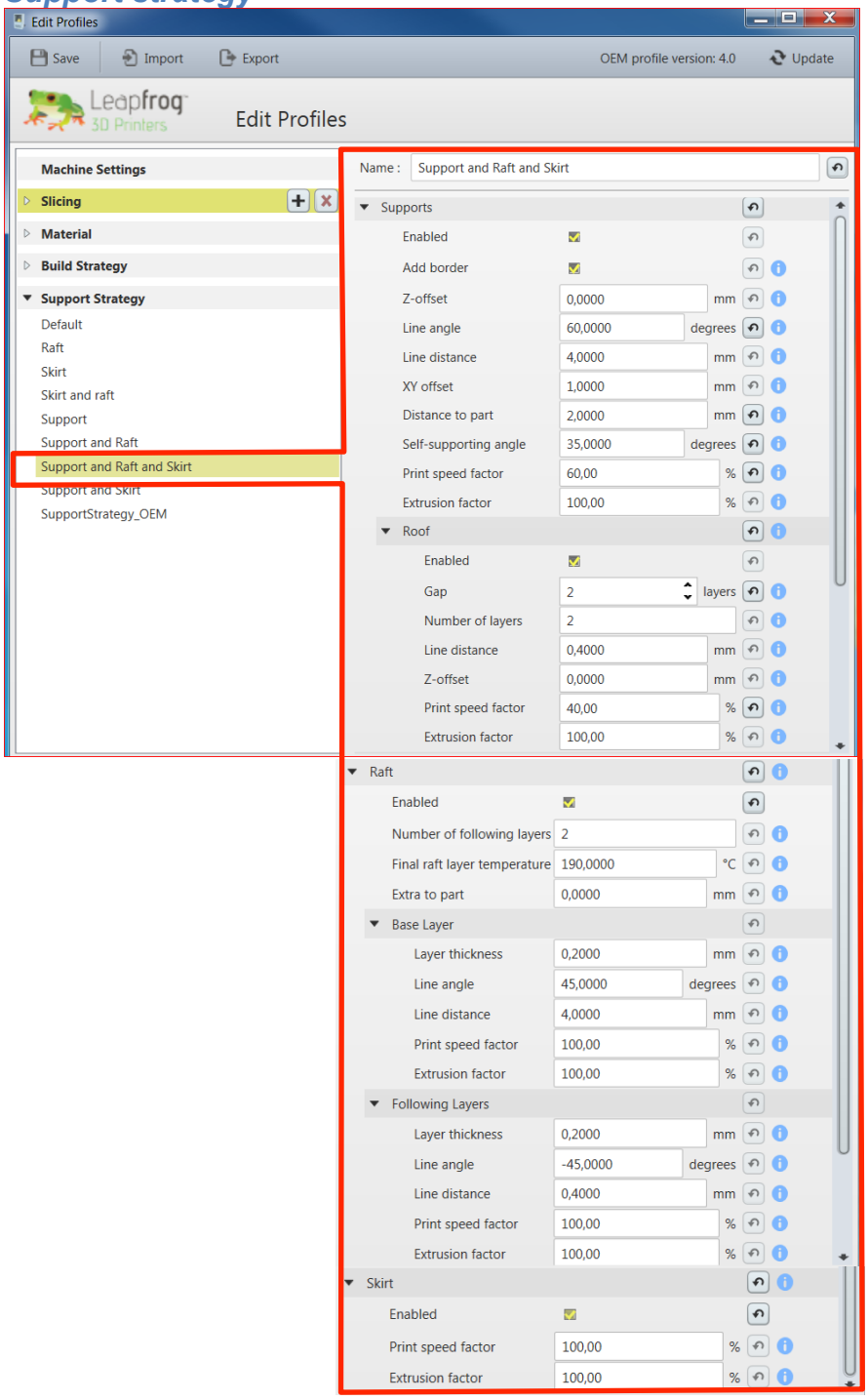


Angle increment: here the user can set the angle increment that will be used when printing consecutive layers.

Print speed factor: here the user can set the speed at which the infill will be processed as a % of the nominal speed defined in the material profile.

Extrusion factor: here the user can set the amount of extrusion as a % of the master extrusion rate defined in material profile.

Support strategy



Name: here the user can set the name for the support strategy profile

Support

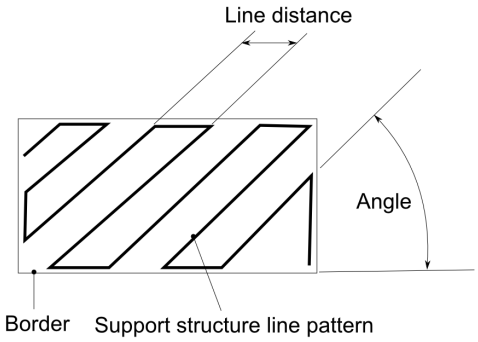
Enabled: here the user can activate the support generation function

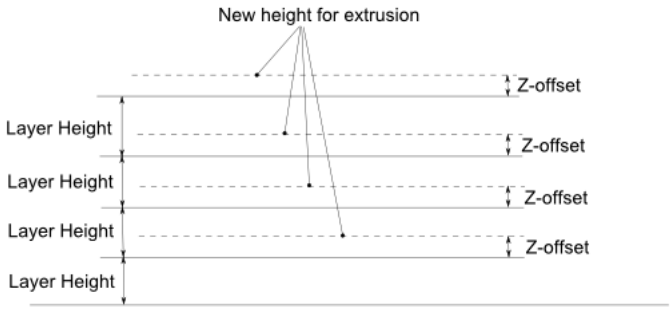
Add border: here the user can activate the generation of a border around the support structure.

Z-offset: here the user can set an additional offset on the layer height used to print the support structure.

Line angle: here the user can set the angle that will be used to draw the support structure lines.

Line distance: here the user can set the distance between 2 lines of the support structure pattern

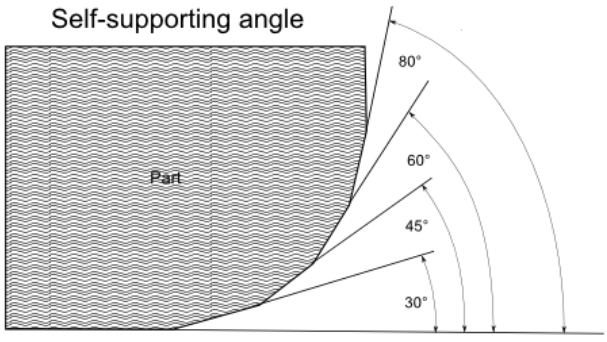




XY extension: here the user can set the offset in X & Y that will be used to generate the support structure. The support structure will be extended in X&Y

Distance to part: here the user can set the distance the support structure needs to keep from the part(s) during generation of the support structure.

Self-supporting angle: here the user can set the self-supporting angle that will be used to determine which parts of a model need support and which not during the support generation. All areas that have a support angle lower than the self-supporting angle will be supported.

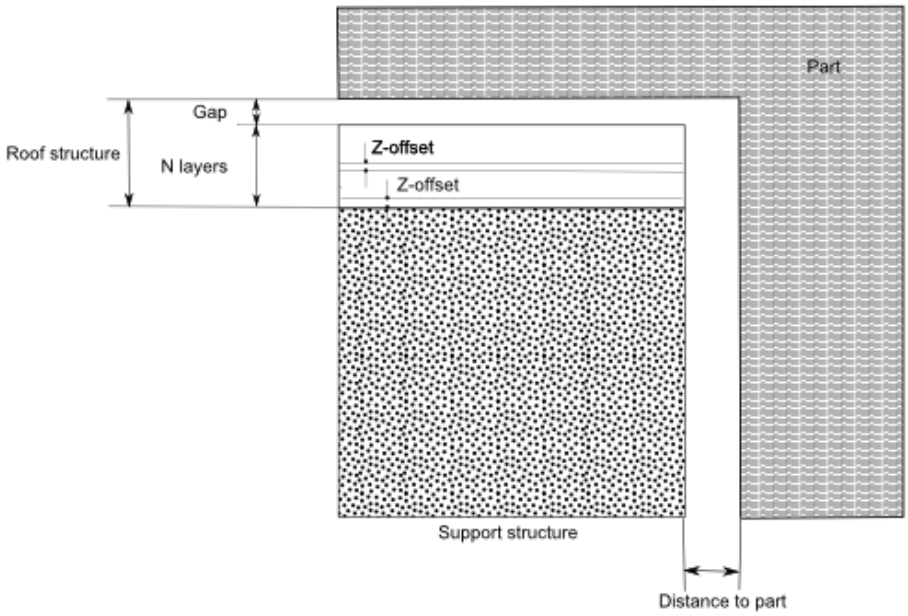


Print speed factor: here the user can set the speed at which the support structure will be processed as a % of the nominal speed defined in the material profile.

Extrusion factor: here the user can set the amount of extrusion that will be used for the support structure as a % of the master extrusion rate defined in material profile.

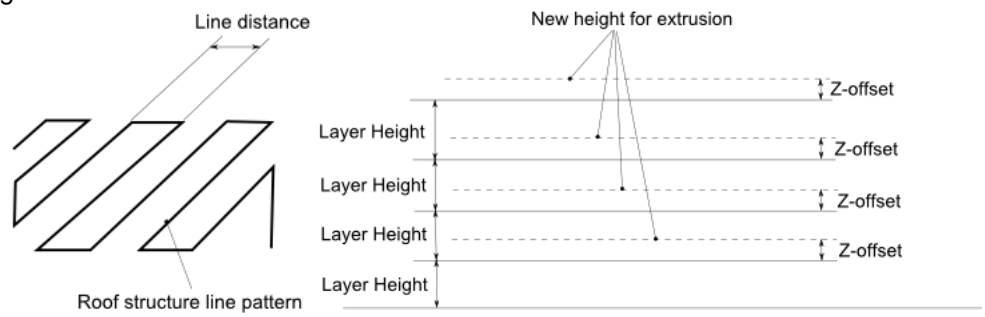
Enabled: here the user can activate the generation of a roof on top of the support structure to make an easy removable interface between part and support.

Gap: here the user can set the size of the gap between roof and part define as a multiple of the layer thickness.



Number of layers: here the user can set the number of layers that will generated to construct the roof.

Line distance: here the user can set the distance between 2 lines of the line infill used to generate the roof structure.



Z-offset: here the user can set an additional offset on the layer height used to print the roof structure.

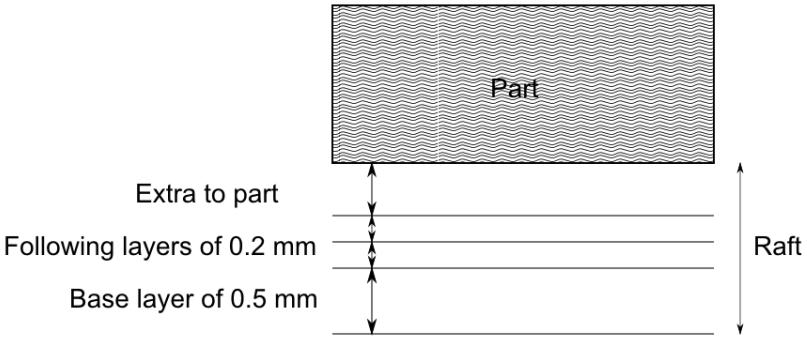
Print speed factor: here the user can set the speed at which the support structure will be processed as a % of the nominal speed defined in the material profile.

Extrusion factor: here the user can set the amount of extrusion that will be used for the support structure as a % of the master extrusion rate defined in material profile.

Raft

Enabled: here the user can activate the generation of a raft structure.

Number of following layers: here the user can set how many layers will be generated after the base layer.



Final raft layer temperature: here the user can set the extrusion temperature for the final layer of the raft.

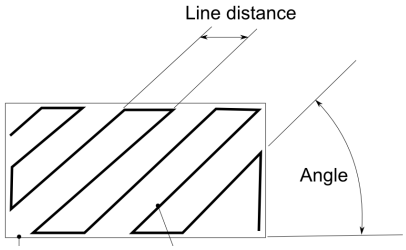
Extra to part: here the user can set the gap between the raft final layer and the part.

Base layer / Following Layers

Layer thickness: here the user can set the layer thickness of the base layer

Line angle: here the user can set the line angle of the line infill of the base layer or following layers

Line distance: here the user can set the distance of the line infill of the base layers or following layers

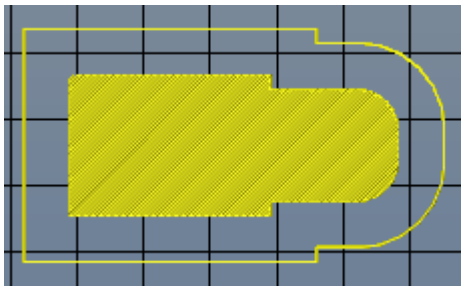


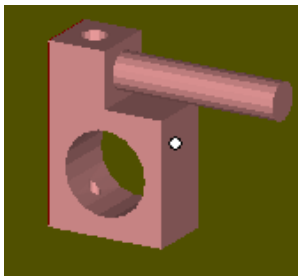
Print speed factor: here the user can set the speed at which the raft structure first layer or following layers will be processed as a % of the nominal speed defined in the material profile.

Extrusion factor: here the user can set the amount of extrusion that will be used for the raft structure first layer or following layers as a % of the master extrusion rate defined in material profile.

Skirt

Enabled: here the user can activate the generation of a skirt for priming the nozzles.

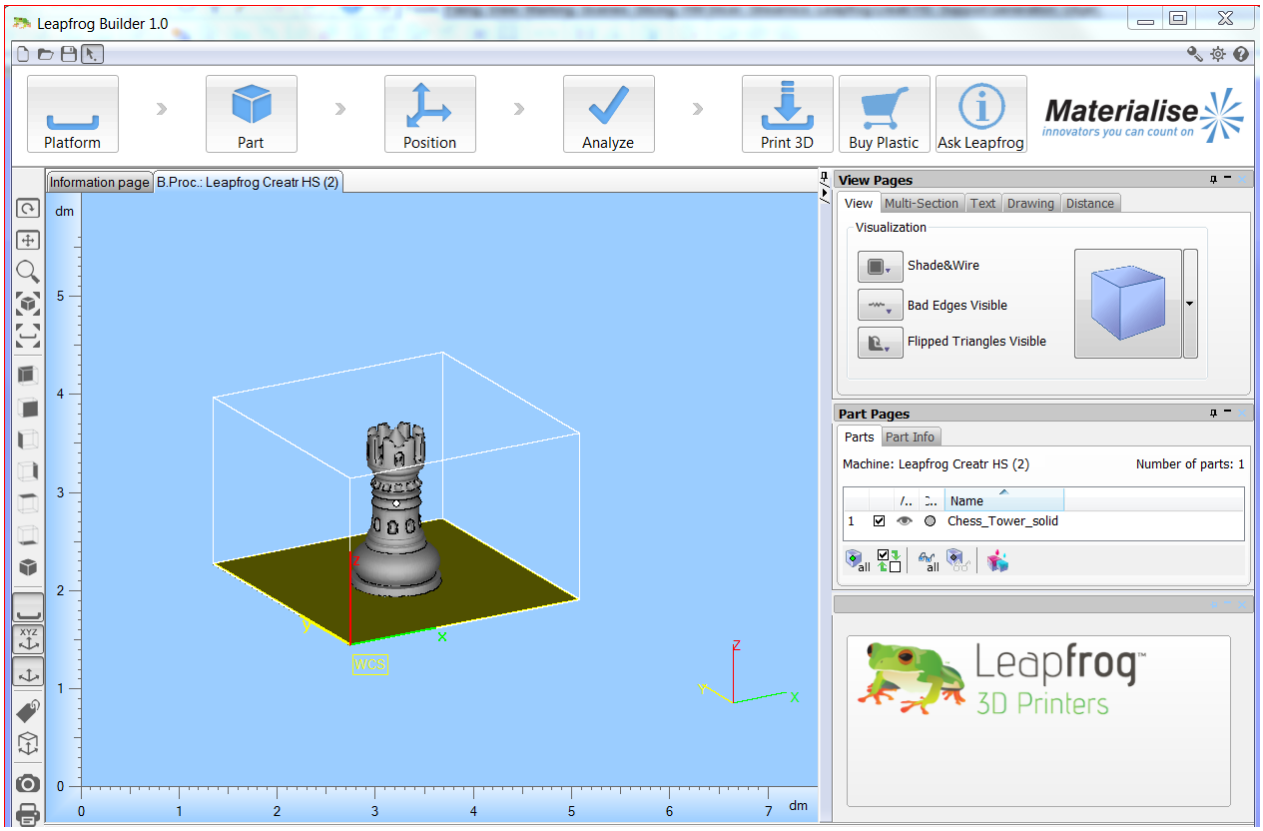




Print speed factor: here the user can set the speed at which the skirt structure will be processed as a % of the nominal speed defined in the material profile.

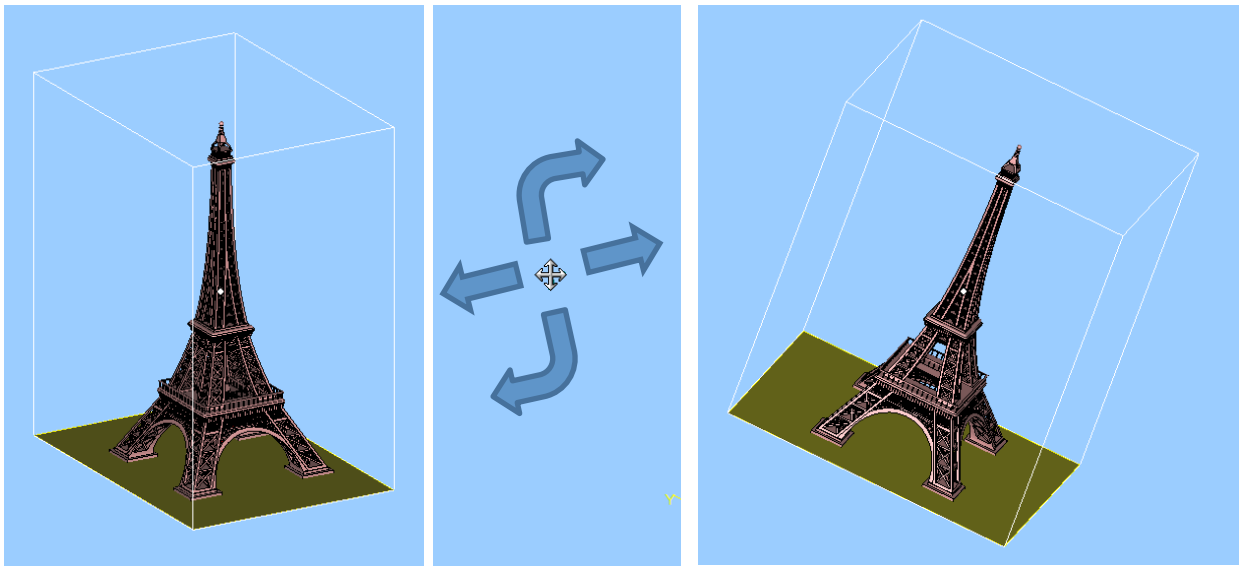
Extrusion factor: here the user can set the amount of extrusion that will be used for the skirt structure as a % of the master extrusion rate defined in material profile.

Visualize [View toolbar and Tool sheets]



View Toolbar

Rotate and Pan



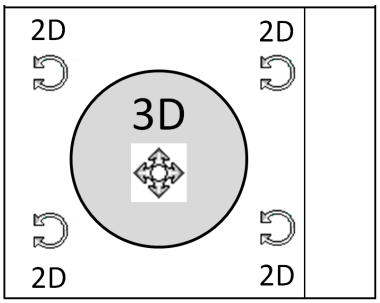
The ***Rotate*** function allows rotation of your part around all three axes of your screen.

Click the Rotate button and use your left mouse button (press it in the workspace) to rotate your part.

The Rotate function has two different cursor images that depend upon the cursor position on the screen: a quadruple arrow shape when the cursor is in the middle of the screen and a circular arrow shape when the cursor is at the edge of the screen.

Quadruple arrow
The movement of the cursor is translated in a rotation around the three axes in the screen (3D movement).

Circular arrow
The movement of the cursor is translated in a rotation around the axis that is perpendicular to the screen (2D movement).



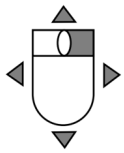
The easiest way to know which mouse mode will be used is to imagine a big disc in the center of your workspace (indicated with a grey disc).

When your cursor is inside this imaginary disk, it will have a quadruple arrow shape (3D movement).

When it is outside this imaginary disk, it will have a circular arrow shape (2D movement).

It is important to notice that the position of your part in the workspace has no influence at all, only the position of the cursor in the workspace determines the type of rotation (2D or 3D movement).

The ***mouse*** also has a rotate option:

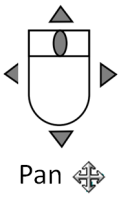


You can also access the rotate function via your right mouse button shortcut (without clicking on the Rotate button).

Press your right mouse button and keep it down while moving your mouse, the part will rotate in accordance with your mouse movements.

The ***Panning*** function allows you to pan your part in your workflow. Click the Panning button and use your left mouse button (press it in the workflow) to slide your part.

The ***mouse*** also has a pan option:



- Panning with a three button mouse is easily accomplished by clicking and dragging with the scroll button (middle button).
- You can also pan with your right mouse button shortcut by holding the shift key down and then clicking and holding the right mouse button while moving the mouse

Zooming

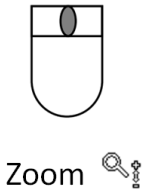
The View toolbar has several zoom options:

Zoom [Alt + Z]
Allows zooming into a specific area of the part. This is accomplished by clicking the left mouse button and dragging a window around the region of the part where you want to zoom.

Unzoom [Alt + U]
Unzoom will fill the screen with all visible parts. The fill is such that the entire part will be displayed even during any rotation.

Unzoom Platform
Unzoom Platform shows the parts and their placement on the machine platform.

The ***mouse*** also has zoom options:



- When using a mouse with a scroll button, roll the scroll button forward to zoom in and backward to zoom out.
- To use the right mouse button shortcuts to zoom, first hold down the control key, then press and hold the right mouse button. To zoom in, move the mouse cursor up the screen and to zoom out, move the mouse cursor down the screen.

ISO views

Buttons for changing the viewing angle are also located on the View toolbar:

There are six ***Planar*** ISO views: Back, Front, Left, Right, Top, Bottom and there is one ***TopFrontRight*** ISO view.

Show/Hide

With these buttons you can show or hide the following features:

Shows or hides the ***World Coordinate System***.

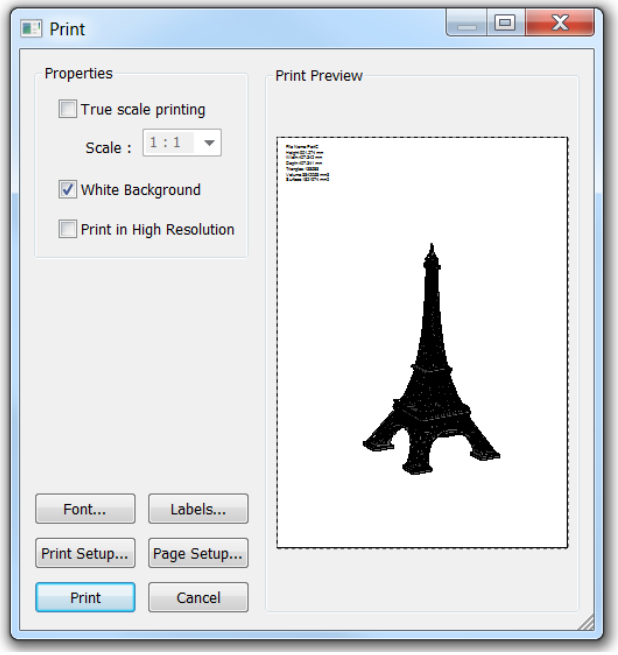
Shows or hides the ***Orientation Indicator.***

Shows or hides your ***Part Names.***

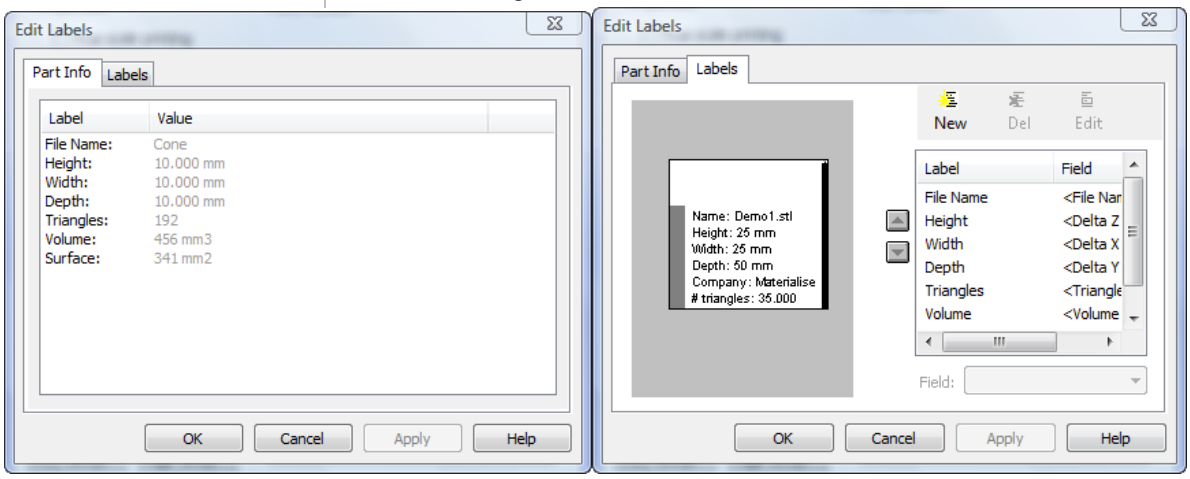
Copy to clipboard/Print2D

Use the **Copy to Clipboard** function to make a screenshot of your Workspace

The **Print2D** starts the print wizard that leads you to the *Page Setup* and the standard Windows *Print Setup* dialog box.



Print Preview	The right part of the print dialog box is the Print preview.
True Scale Printing	This feature allows you to print a scaled copy. This means that you can measure on the printed page. *Remark:* Be aware that perspective views never allow measuring
Font...	This allows you to define the font of the labels
Labels...	Specify the part information that should be printed i.e. define labels
Print Setup...	Use this option to choose another printer, paper size or paper orientation using the standard Print Setup interface
Page Setup...	*Page Setup* allows you to define a print style. It's a standard Windows dialog box



Part Info

The Part Info tab gives an overview of the labels (part information) that will be printed on paper together with the part. Labels are only available when a single part is visible in the Workspace. You can define your labels by clicking on the Labels tab.

Labels

New	A New Label and Field are added at the bottom of the list. The user can immediately change the label and the field type.
Del	To delete a label and a field: Select the label, and press on the Delete button.
Edit	The user can edit a label by selecting one, and pressing the Edit button.
Rearrange Label	The order of the labels can be changed with the arrow buttons. Select a label, and use the arrow buttons to move it one place up, or one place down the list.
Field Types	Several Field Types are predefined.
Changing Field Types	Select a Label, and select another field type.

View Pages

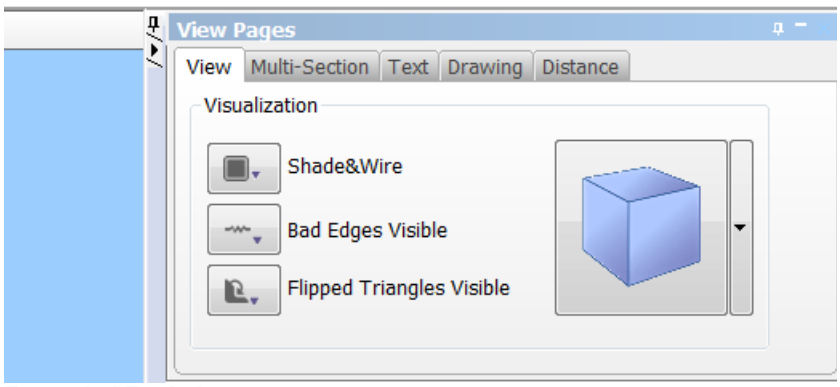
The View Pages Tool sheet contains following tabs which are explained in detail in this chapter:

1. View
2. Multi-Section
3. Text
4. Drawing
5. Distance.

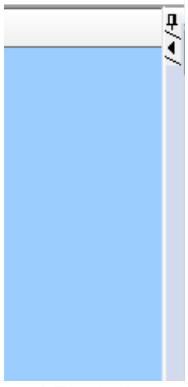
The View tab allows you to change the visualization of your STL-files. You can also inspect your files by creating sections and performing measurements. Furthermore, the annotations (text and drawings) allow you to easily communicate with others.

Click the little black arrow to collapse/expand the Tool sheet.

If you click the little thumbnail, the Tool sheets will automatically collapse when you leave it with your mouse. To expand it again, you should touch the right side of your screen (with your mouse cursor).



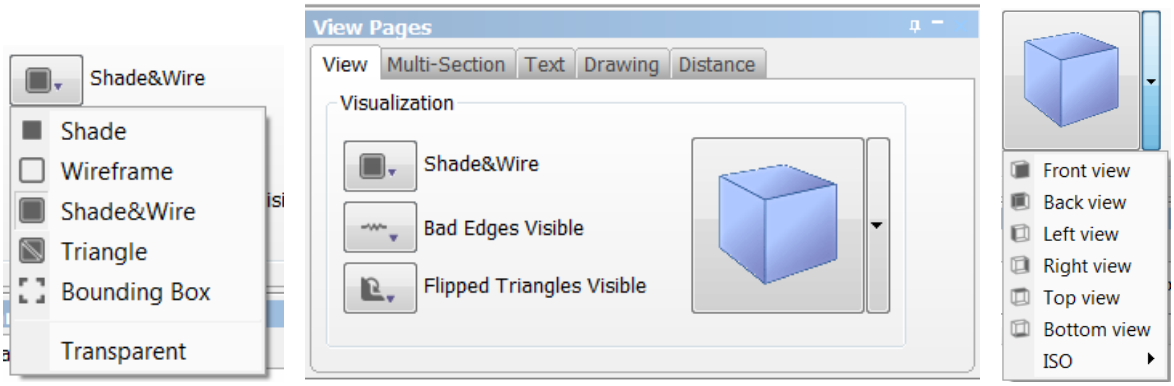
Expanded Tool sheet



Collapsed Tool sheet

View

The several Shade&Wire options and View angles are selectable through drop down menus.



The ***Shade&Wire*** options are the first functions you found on the View toolbar. These functions are used to change the way your part is displayed in the Workspace.

Shade
Displays the part with shades according to the direction of the triangles.

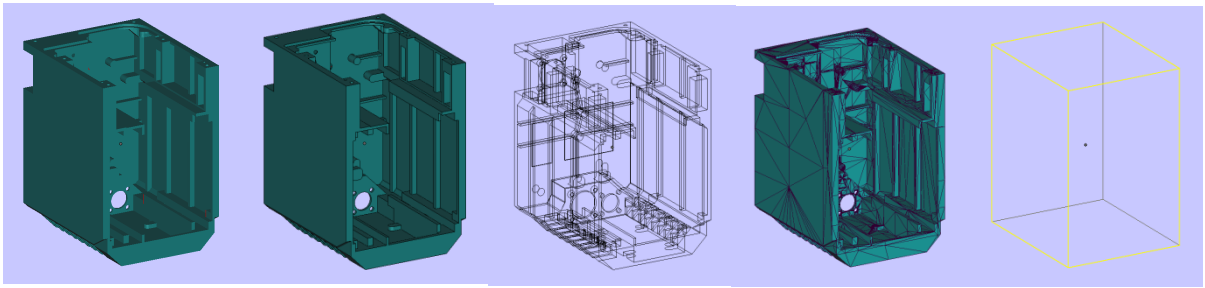
Wireframe
Shows edges of the object. The edges are defined by the angle of incidence between triangles. Creatr defines a visible edge when the angle between two adjoining triangles exceeds the 'definition set' found in the Creatr

Shade & Wire
Displays a combination of shade and wireframe modes

Triangle
Shows the edges of all triangles. This view shows the native STL file format.

Bounding Box
Shows only the bounding box (X, Y and Z extents) of the part. This makes rotating parts with a large number of triangles easier (less memory usage). Also, very small bad edges (triangles which are not properly connected) are more evident in this mode because they remain visible (as yellow lines) while the rest of the part is not visible.

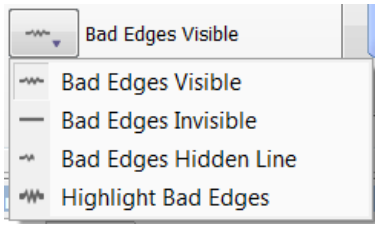
Transparent
This option makes your parts transparent.

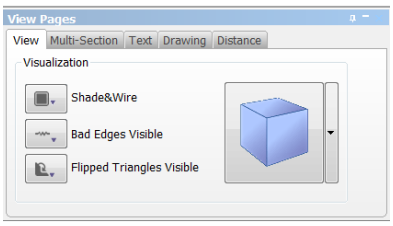


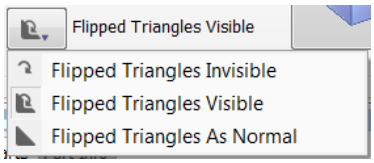
Different View modes (from left to right): Shade, Wireframe, Shade & Wire, Triangle and Bounding Box

The ***View Cube*** has a drop down menu that contains the different default views along with eight ISO views. You can also click on the View Cube itself. Clicking on a side will activate that particular view.

Sometimes, STL-files contain errors and need to be redesigned or fixed. These errors are visualized by default, but you can choose to hide or highlight them.



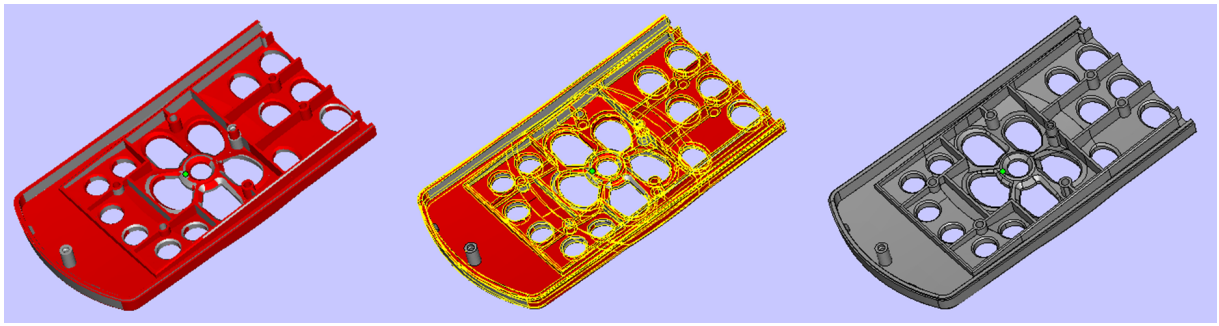




In the ***Flipped Triangle*** drop-down menu, you can choose how to display Flipped Triangles: Visible, Invisible or As Normal.

In the ***Bad Edges*** drop-down menu, you can choose how to display bad Edges: Visible, Invisible, Hidden Line or Highlight Bad Edges.

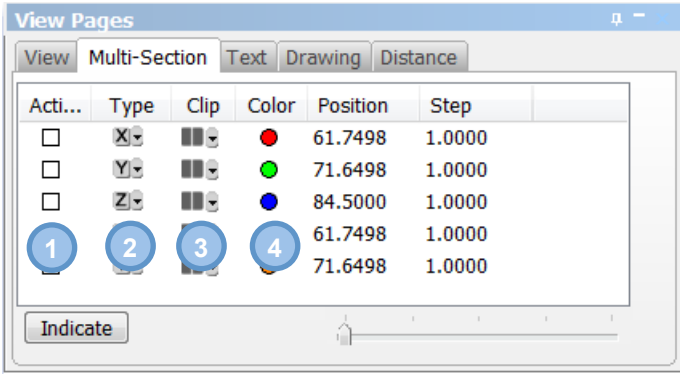
The figure below gives you an example of making errors visible. It is highly recommended to visualize Bad Edges and Flipped Triangles so you can see at a single glance if your part needs fixing or not.

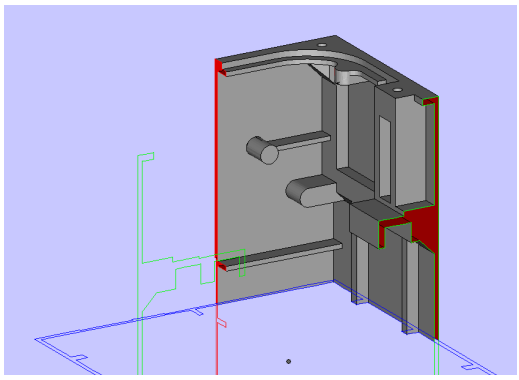


Left: Flipped Triangles visible, Middle: Flipped Triangles and Bad Edges visible, Right: Flipped Triangles and Bad Edges invisible

Multi-Section

Sections are useful to measure, check for errors and look inside the part. With sections you can hide certain parts of your object. They are perpendicular to the X, Y or Z axis. You can define your sections in the ***Multi-Section*** tab of the View Pages Tool sheet.





1. Click on the ***Active*** checkboxes to toggle the sections on or off (so you can define which sections are displayed). You can activate up to five sections at the same time.

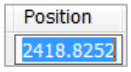
2. With ***Type*** you can define how the section is created. You can choose between X, Y or Z to set the section perpendicular to the corresponding axis.

3. The ***Clip*** function allows viewing inside the part. You can define the portion of the part that will be hidden. With a first click, the portion of the part towards the coordinate system will be hidden. A second click will hide the portion away from the coordinate system. A third click will show the section on your entire part. Use the displayed drop down menu to choose how to display clipping planes.

4. You can change the ***Color*** of each section by clicking on that section's Color button.

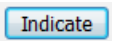
The position of the section can be determined in four ways:

1. The ***Position*** box allows you to enter an absolute X, Y or Z coordinate value to place the section in the desired location.



2. The ***Step*** box allows you to enter an absolute step value. When using the left and right arrows on the keyboard, the section will move according this value.

3. The ***Indicate*** button allows positioning of the section by clicking anywhere on the part (with your left mouse button).

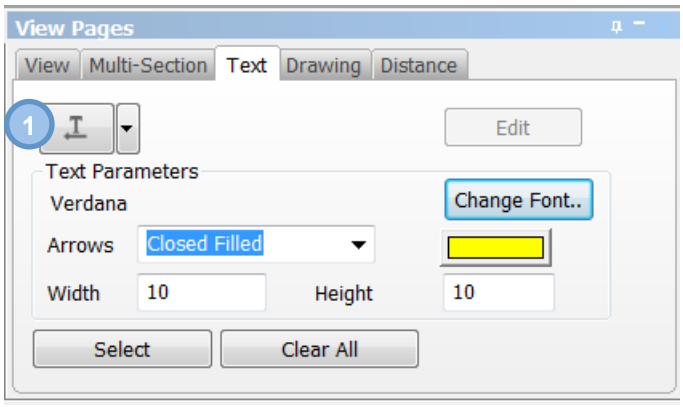


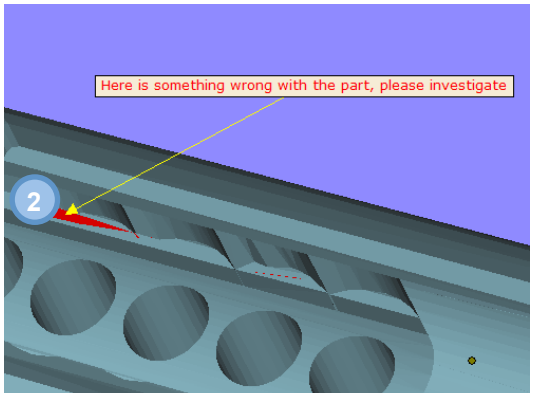
4. The **Slider** alters the position of the section in a continuous manner. The section will be calculated and displayed in real-time. The position of the section is displayed in the Position box.

Sections are only displayed when active (check box is flagged). Sometimes it can happen that you cannot find a certain part. The reason is often that one of your sections is still active and that the part is located in the hidden area of the section.

Text

Adding extra information to your project has never been so easy. You can easily add text to your part and keep a well-organized overview of your project. The text is connected to your part and saved in your leapfrog project file *(*.lbf)*.





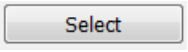
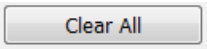
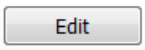
1. Go to the Text tab of the View Pages Tool sheet and click the Text and Arrow option. Use the displayed drop down menu to choose Text only.

2. Indicate a point on your part where you want to attach the label and click a second time to define the position of the label itself. Afterwards, type your message in the text dialog.

Under Text Parameters, you can change the look and feel of the text and arrows:

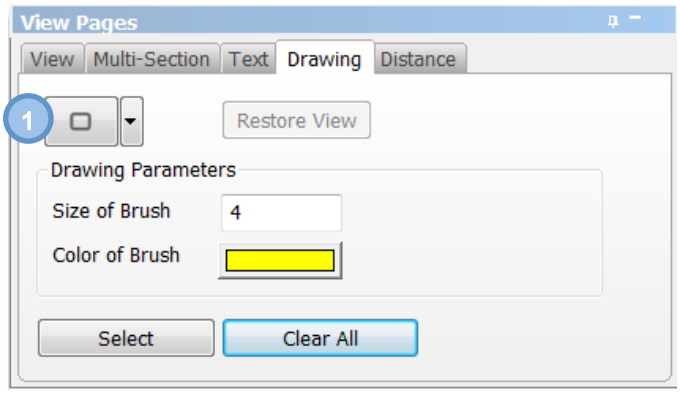
	This button allows changing font, font style, size and color.
Arrows	The style of the arrows can be adapted. You can choose between Open, Closed Filled, Closed or None
	This button allows changing the color of the arrows
Width	Here you can change the width of the arrows
Height	Here you can change the height of the arrows

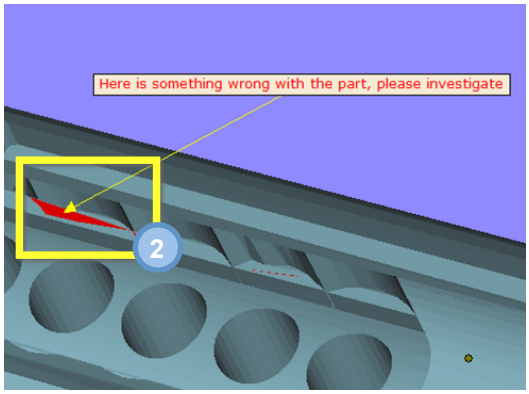
Furthermore you have buttons to change the settings and to select, edit or clear your text annotations:

	This button allows selecting an existing text annotation. If you afterwards press the delete button of your keyboard, you can delete the selected annotation.
	This button allows to clear all annotations (text and drawings) in a single click
	If you have selected an existing annotation, you can use this button to modify the text

Drawing

You can highlight certain areas by adding drawings to your project. The drawings are projected on the screen and saved in your Leapfrog project file (*.lbf).





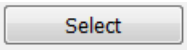
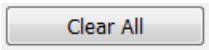
1. Go to the Drawing tab of the View Pages Tool sheet and click the Rectangle option. Use the displayed drop down menu to choose Ellipse or Freehand.

2. Go to the area you want to highlight and make your drawing

Under Drawing Parameters, you can change the size and color of the brush:

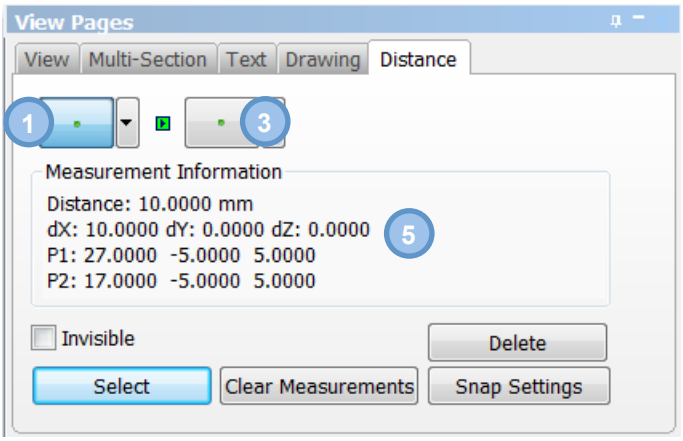
Size	Here you can change the thickness of the brush
	This button allows changing the color of the brush

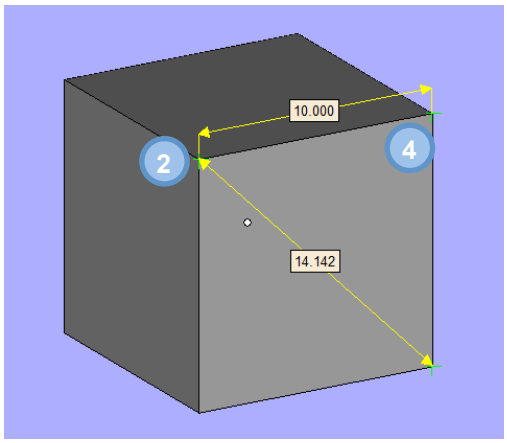
Furthermore you have buttons to change the settings and to select, clear or restore the view of your drawings:

	This button allows selecting an existing drawing. If you afterwards press the delete button of your keyboard, you can delete the selected drawing.
	This button allows to clear all annotations (text and drawings) in a single click
	A drawing is not fixed to the part but a projection on the screen. If you rotate or pan the part view, the drawing will not move simultaneously. You can restore a certain view point by selecting the relevant drawing and clicking Restore View.

Distance

Creatr allows you to measure distances on your parts. All measurements are performed on the wireframe. Therefore, measuring is best performed in the 'Shade and Wireframe' or 'Triangle' viewing mode to minimize interpretation errors during measurement.





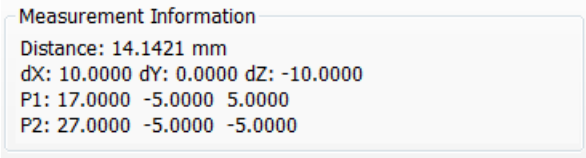
1. Go to the Distance tab of the View Pages Tool sheet and click the Point option

2. Click on the first point of your part which you want to measure from

3. Creatr allows you to immediately select a next Point

4. Now, click on the second point of your part which you want to measure to. The measurement will now be active but not yet finished. At this point, dragging the cursor will move the measurement tag. Click the mouse one more time to set the measurement tag in place.

5. On the Distance tab, you will find all information regarding your measurement



Furthermore you have buttons to change the settings and to select, clear or hide your measurements:

Select	This button allows selecting an existing measurement
Delete	This button allows to delete a single measurement just by clicking on the measurement tag
Clear Measurements	This button allows to clear all measurements in a single click
Snap Settings	This button allows changing how the Point will snap on the part
Invisible	This checkbox allows to hide all measurements

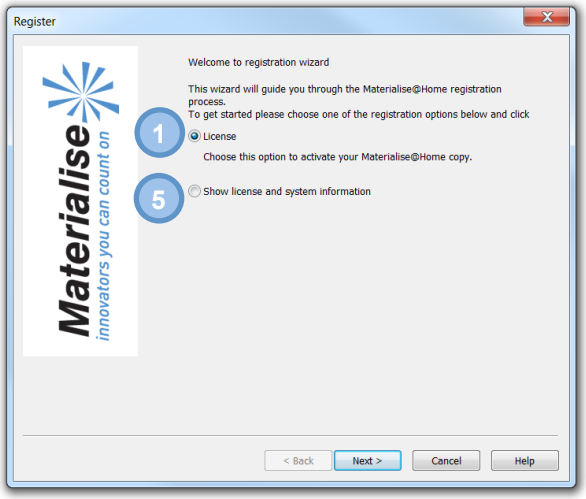
Licenses and Settings [Main Toolbar]

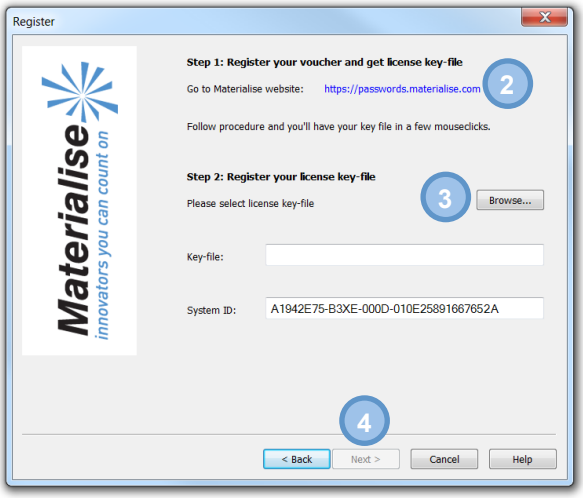
Licenses |

Materialise Software is key protected (you need a key-file to register the software). Creatr is not sold separately but bundled together with your 3D-Printer. So together with your 3D-Printer, you also received a voucher code. You should use this voucher code to generate a key-file on our website. Afterwards, this key-file will allow you to register and activate your Creatr copy.

When you start Creatr for the first time, the License Wizard will automatically start up to assist you in registering. You can also open the Registration Wizard by clicking on the Licenses button in the Main Toolbar.

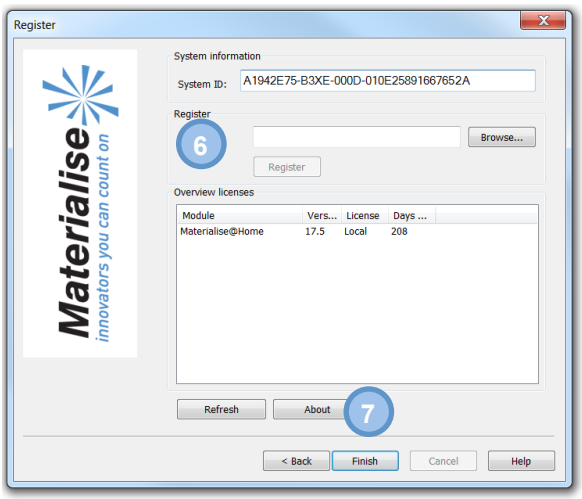
1. Choose License to activate your Creatr software
2. Register your voucher code and get your (license) key-file
   Go to on our Materialise web password site <https://passwords.materialise.com> and follow the procedure to get your key-file (download and save the key-file on your computer).
3. Click Browse to select the key-file you generated in step 2
4. Click Next to register the selected key-file

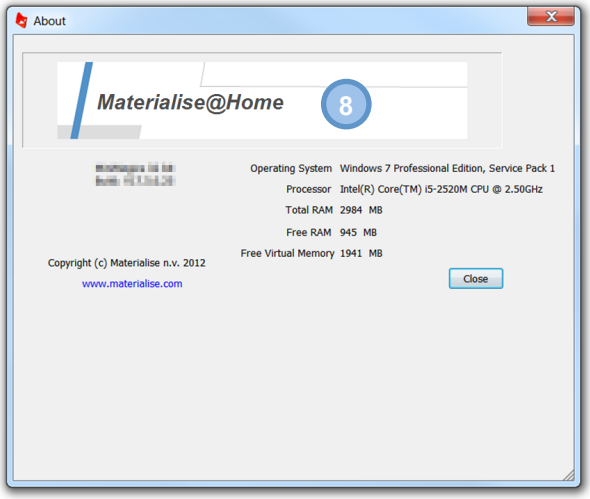

Register
Materialise
innovators you can count on
Welcome to registration wizard
This wizard will guide you through the Materialise@Home registration process.
To get started please choose one of the registration options below and click
1
License
Choose this option to activate your Materialise@Home copy.
5
Show license and system information
< Back
Next >
Cancel
Help



Use the option *Show license and system information* (5) on the first page of the Registration Wizard to get your System-ID (6) and an overview of your active license (and how many days you have left before the license is set to expire). Your *System-ID* is a unique identifier for your PC. This ID is dependent on your hardware and we need this ID to generate a key-file.

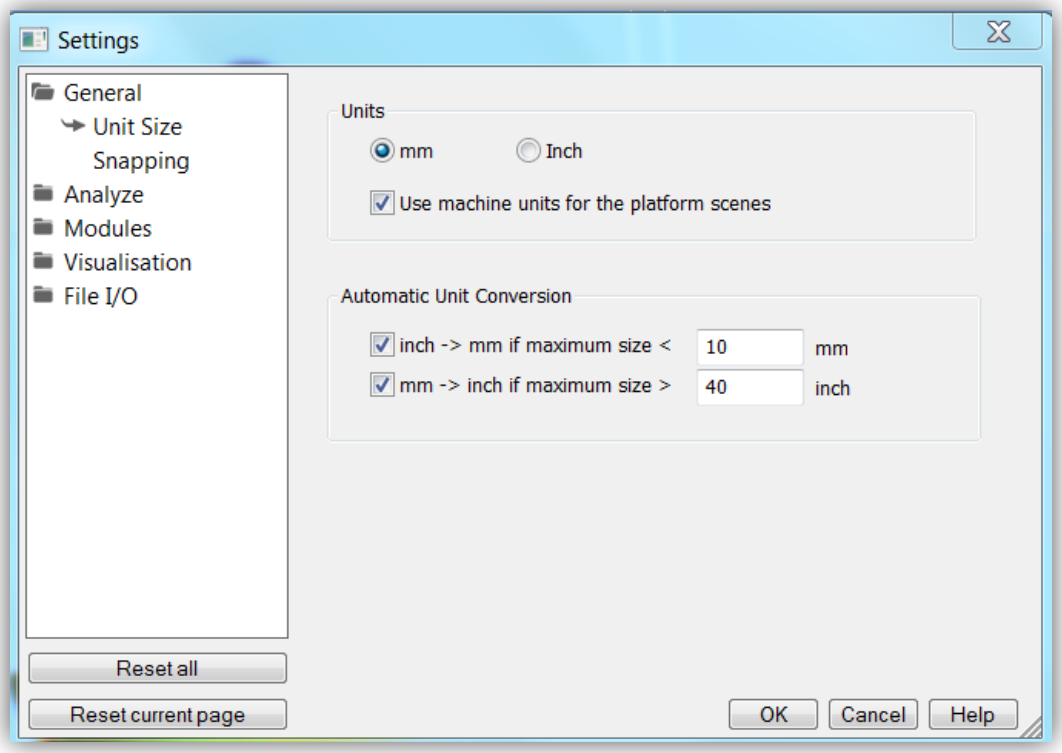
Click the *About* button (7) to open the Creatr *About* dialog (8) which displays the exact Creatr version together with some system specific information.





***Settings* |**

General > Unit Size



Units You can choose between mm and inches. You will have to select the units before you load STL files. If the STL file was originally in millimeters, you have to choose mm. If the file is in inches, you will have to choose Inch. If several parts are loaded, some in millimeters and some in inches, the Unit Conversion has to be used otherwise parts are out of proportion. Creatr always remembers the last used unit and takes this as default the next time you start.

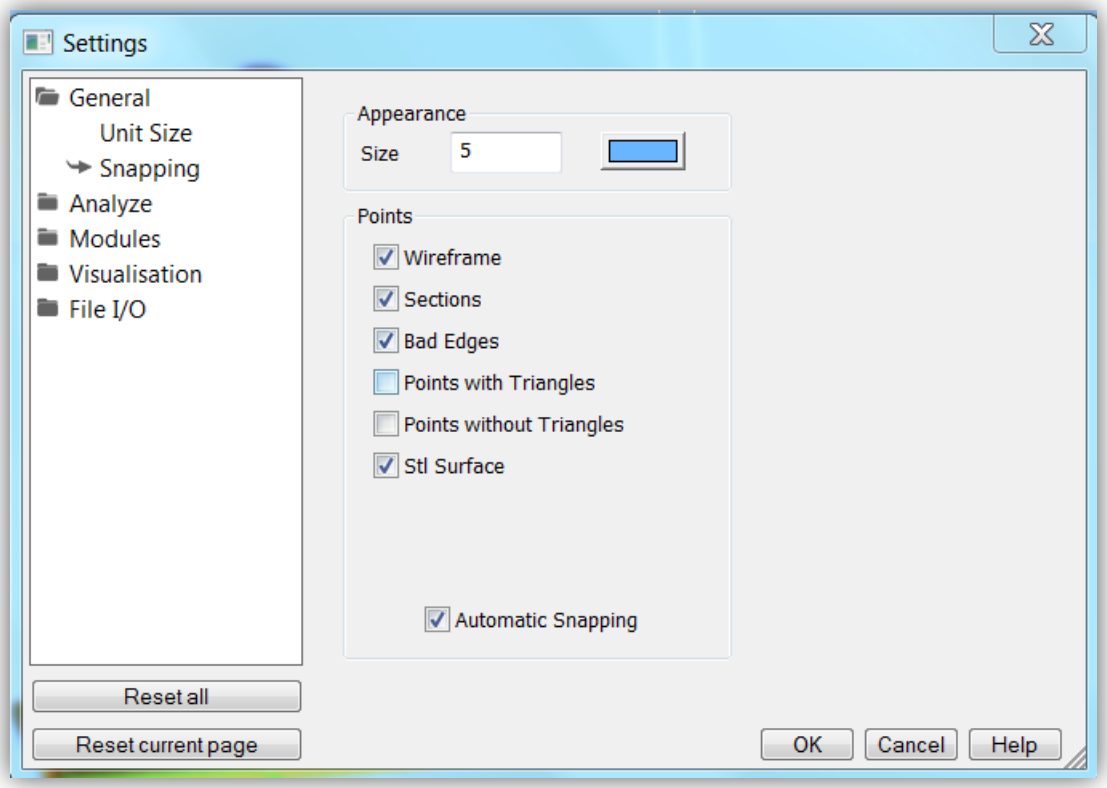
Automatic Unit The automatic unit conversion is used to avoid mistakes due to the units you work

Conversion

in. It may be that you are working in millimetres, and that you load a part whose dimensions are expressed in inches. A part of 2inch*2inch*2inch, will then become a part of 2mm*2mm*2mm. The size of the part is not correct anymore. Because 1inch is 25.4mm, the dimensions of the part expressed in millimetres are bigger than those when the part is expressed in inches. A part of 2inch*2inch*2inch, is as big as a part of 50.8mm*50.8mm* 50.8mm.

When you are working in millimeters and you load a part and the dimensions are very small (you can define 'very small' i.e. when 'maximum size is smaller than X mm' in the options – see figure above), it may be that the part you loaded was originally expressed in inches. Magics will then multiply the dimensions with 25.4 (inch to mm conversion), so the part will now be expressed in millimeters. When you are working in inches and you load a part and the dimensions are very big (you can define 'very big' i.e. when 'maximum size is greater than X inch' in the settings – see figure above), it may be that the part you loaded was originally expressed in millimeters. Magics will then divide the dimensions with 25.4, so the part will now be expressed in inches.

General > Snapping



Appearance

Some features in Creatr (for example measurements and text annotations) require that you snap to a point on the part. When you snap to a point, it will be marked with a colored circle with a radius as set in the size box. The little circle will get the color marked in the color box.

Points

You can decide which points you can snap to: points on a wireframe, sections, bad edges, corner points of a triangle, free points (points that are

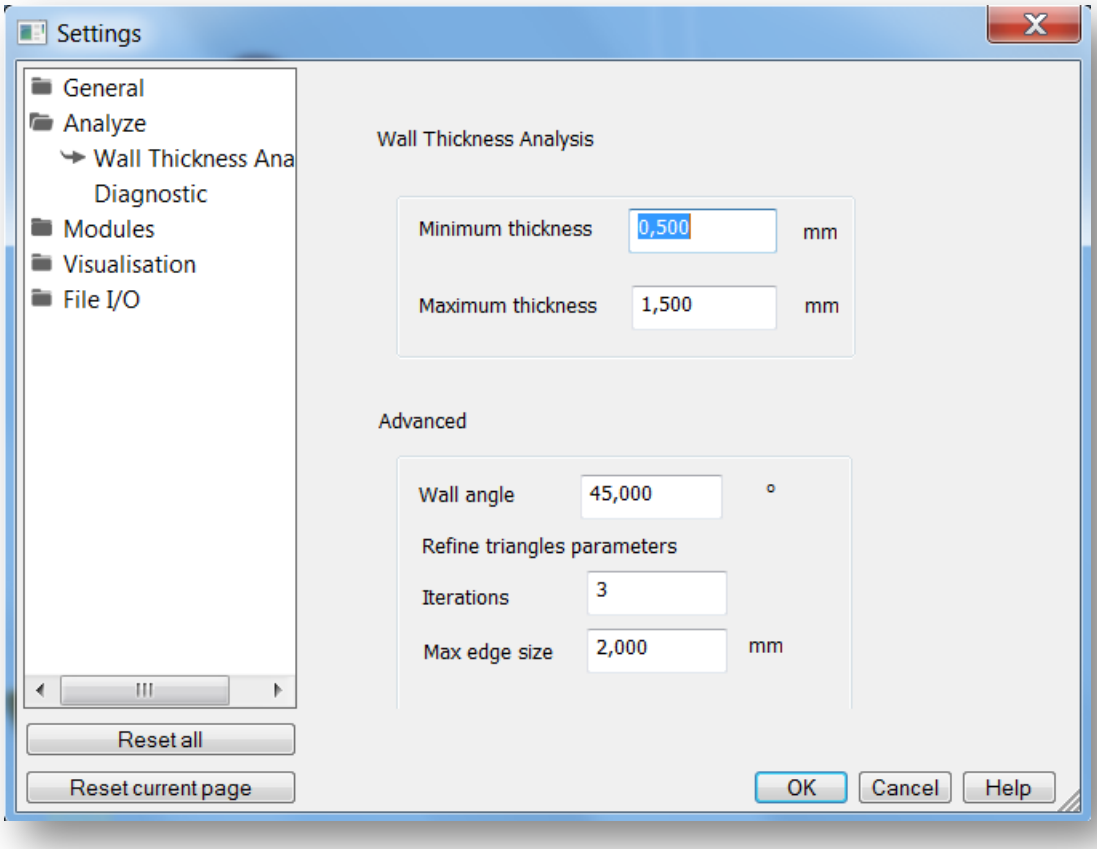
not a corner point of a triangle) and/or points on the STL surface.

When you for example unselect wireframe, you will not be able to snap a point that is lying on the wireframe.

Automatic snapping

ON: When this option is marked, Creatr actively searches for points when you move the mouse over the part. Creatr will highlight these points. To select a point, click on it.
OFF: Creatr will only search for a point when you have clicked with the mouse. This option is faster.

Analyze > Wall tickness analyses



Wall thickness analysis

Minimum thickness: to set the lower limit of the wall thickness analysis tool

Maximum thickness: to set the higher limit of the wall thickness analysis tool

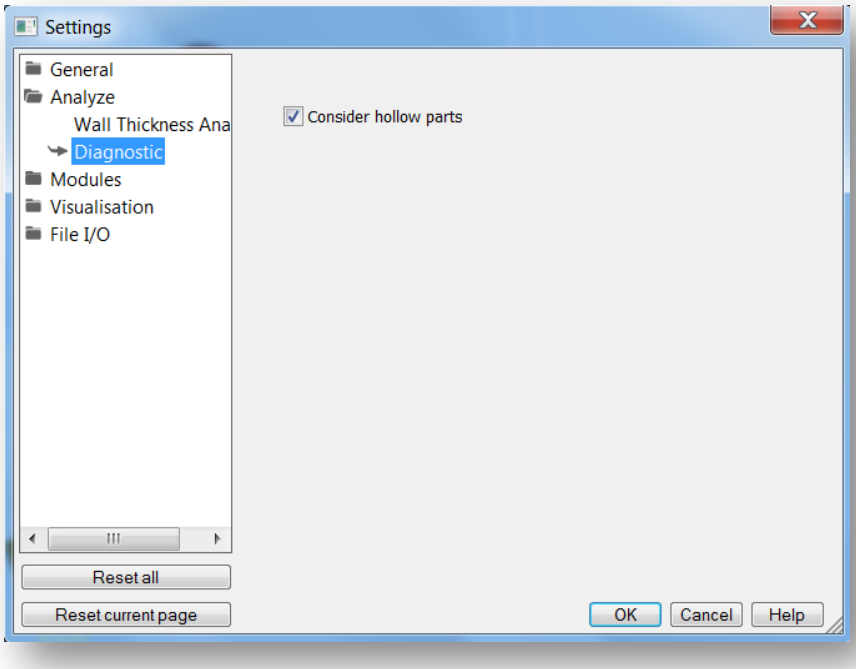
Advanced

Wall angle: The angle the analyze function uses to determine the thickness of a wall

Iterations: how much iteration the analyze function runs when performing wall thickness analysis

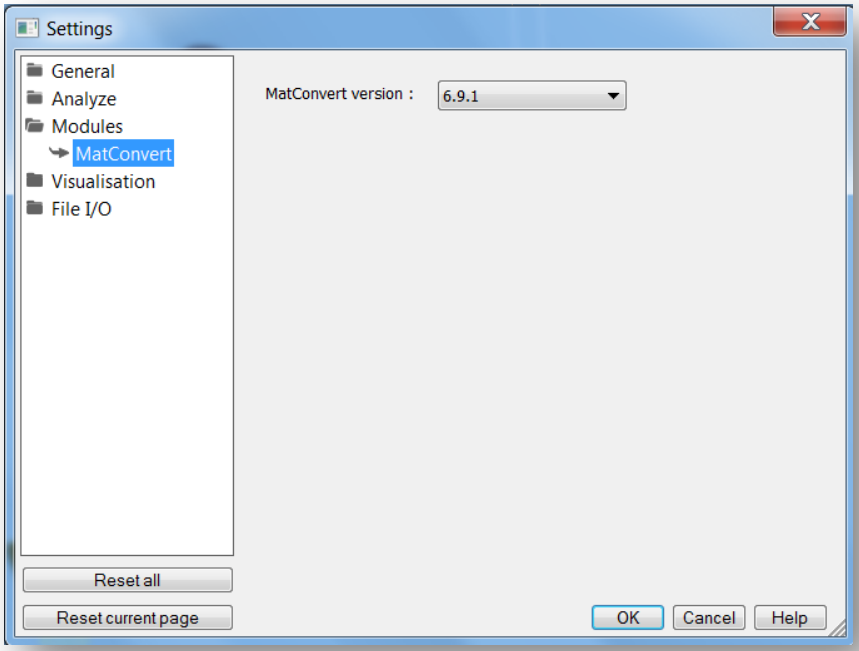
Max edge size: the maximum dimension of an edge region that is treated as an edge.

Analyze > Diagnostic



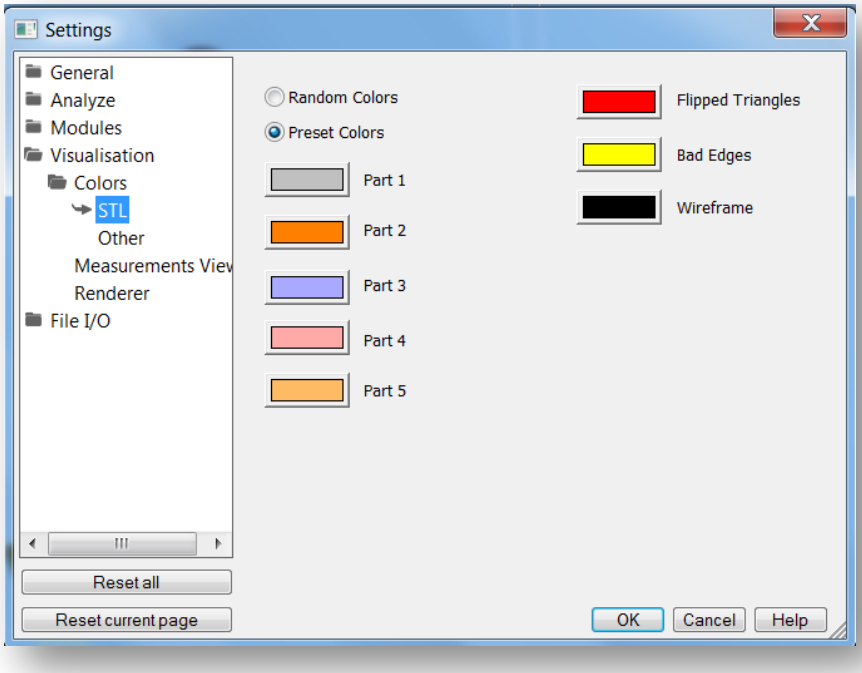
Consider hollow parts checkbox will set the analysis tool to take into account that parts can be hollow.

Modules > MatConvert



The Mat convert version drop down box will allow to select which version of the conversion tool will be used. This to allow the user to upgrade to newer versions without a new install.

Visualisation > STL Colors

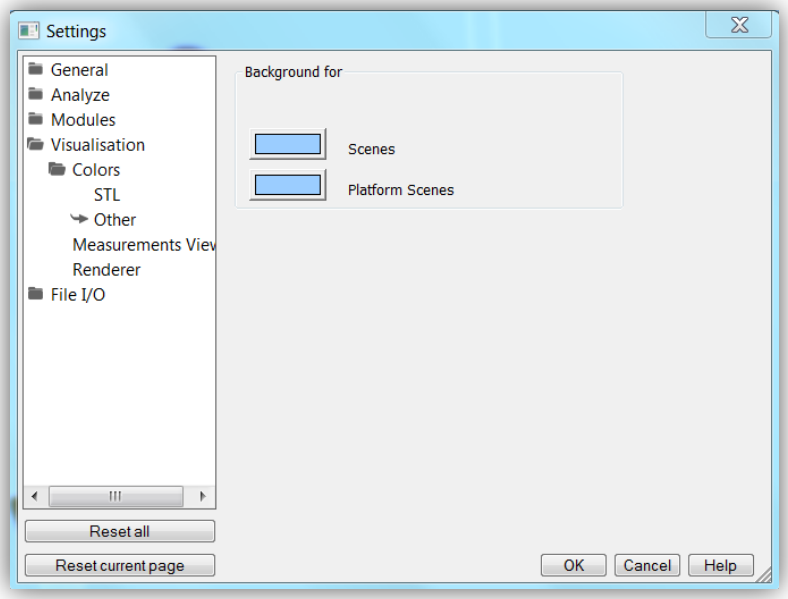


Random Colors — When you select random colors, random colors are used for the different parts you import.

Preset Colors — When you select Preset colors, the colors of this window are used.

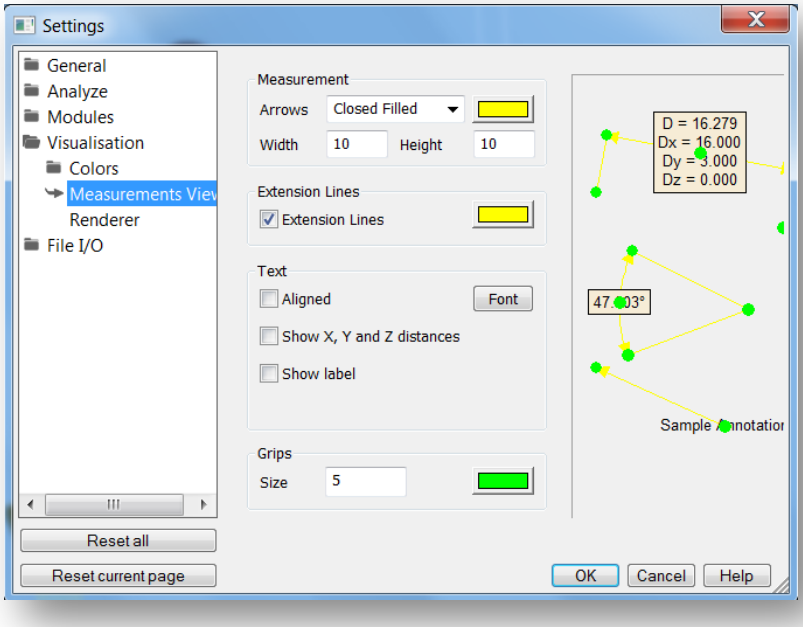
Part 1 to Part 5	These five buttons represent the five colors as they will be assigned to the loaded parts. The first part you load will get the first color. The second part will get the second color and so on.
Flipped Triangles	The color of the flipped (inverted) triangles
Bad Edges	The color of the bad edges
Triangle Border	The color of the triangle borders
Wireframe	The color of the wireframe

Visualization>Other



Here you can select the background colors for scenes and platforms.

Visualization > Measurements View

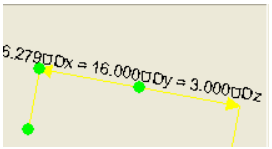
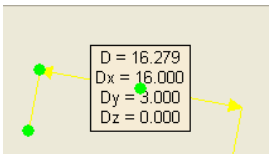
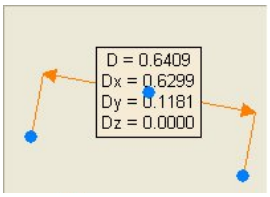


Arrows	Arrows can be placed at the end of the line that indicates the distance between two features. An open, a closed, or a closed filled arrow can be chosen
	The color of the arrows can be adapted
Width	The width of the arrow-head can be adapted
Height	The height of the arrow-head can be adapted

Extension Lines

Extension Lines	You can choose to draw extension lines or not. These extension lines appear when you drag your measurement tag away from the part. Extension lines don't have arrow-heads
	You can adapt the color of the extension lines

Text

Aligned	Checked	
	Not Checked	
	You can adapt the font of the text	
Show X, Y and Z distances	Checked, the measurement value is not aligned.	

Grips

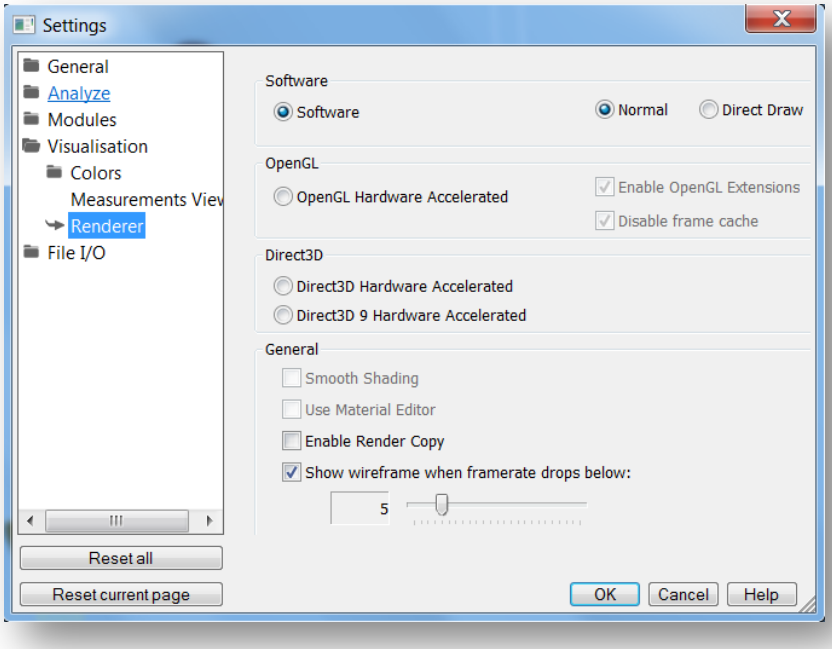
When you select a measurement, some grips (dots) will appear on the measurements lines. They allow changing the position of the measurement entities; the measurement value will be updated.

Size	You can define the size of the grip
	You can define the color of the grip

Features

Draw Features	A detected point is indicated with a cross
	You can define the color of the features

Visualization > Renderer



Modern video cards have specialized hardware to make rendering faster. Creatr can use OpenGL and Direct3D. These video cards will make rendering much faster.

The principle is that your computer sends the triangles to the memory of the video card and the card will do the rendering of the part, following the instructions of Creatr. This has two consequences:

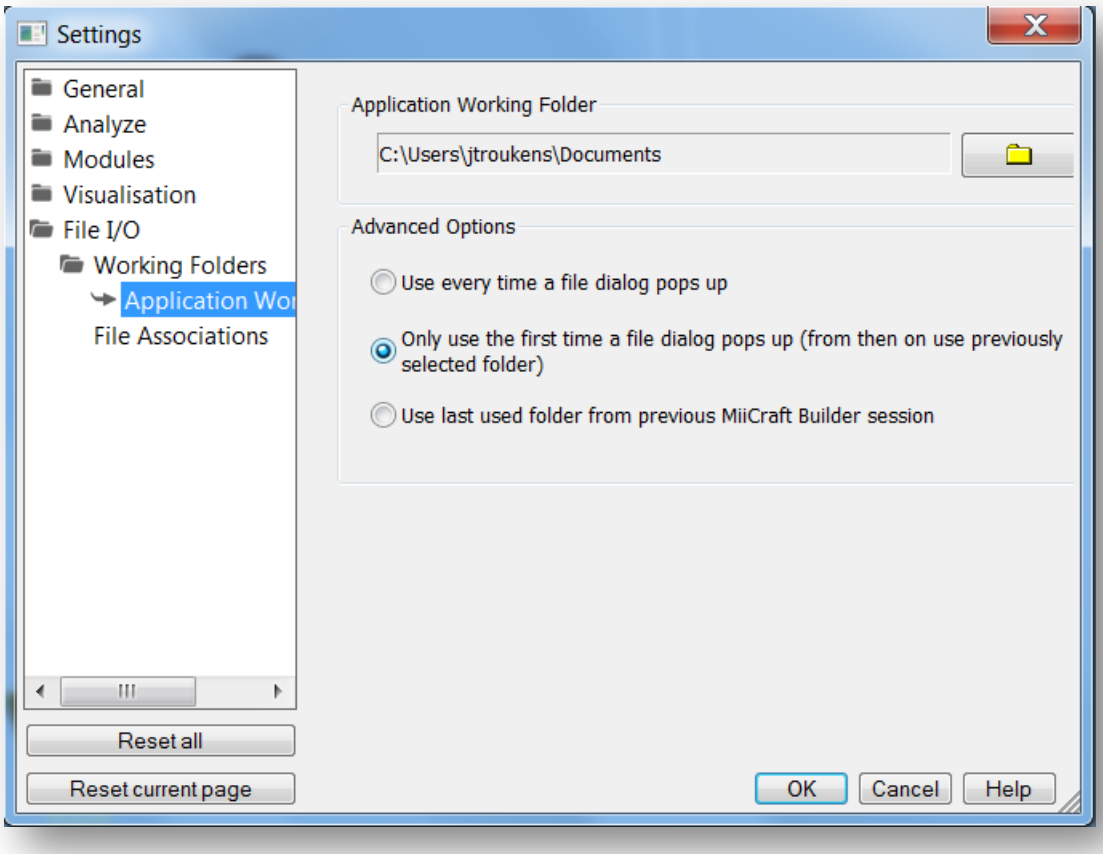
- To have optimal results, the memory on the video card must be large enough (1 MB STL needs approx. 1,5MB ram on the 3D-card).
- Each time the part has been changed, the whole list of triangles must be send again to the video card. This can cause delays depending of the size of the part. When you have a huge amount of triangles (millions of triangles), delays can be avoided by switching back to software rendering. Each 3D-card has a limit.

Remark: We recommend trying each mode and comparing the results. Not only the hardware is important, but also the drivers. If you're having problems, try again with other (more recent) drivers.

Software This renderer is the default renderer of Creatr, written by Materialise. The rendering is a part of the program and is done by the CPU. If you do not have a special 3D-videocard or good drivers, we recommend you to use this setting.

Normal	The whole rendering process is done by Creatr.
Direct Draw	Some instructions of Microsoft DirectDraw are used to speed up the rendering.
OpenGL	OpenGL was developed for CAD purposes and using the HW-acceleration present on the card. If a certain feature is not supported by your 3D-card, the OpenGL-driver will perform that specific instruction via software rendering (software fallback).
Enable OpenGL Extensions	This flag enables advanced OpenGL extensions. When the driver implements these correctly you should see a dramatic improvement in speed. If after enabling this flag you encounter random crashes or don't see a performance increase, it's advised to either update your graphics card driver or disable this flag.
Disable frame cache	Select this setting when you experience problems on high-end OpenGL-cards.
Direct3D Hardware Accelerated	Direct3D is a part of Microsoft's Direct X. Direct X was originally developed for 3D games but Direct3D is also useful for us. When a feature is not implemented on the 3D-card, the Direct3D can't fall back on software rendering, so the instruction won't be done. Direct3D is NOT supported in Win NT.
Smooth Shading	In the Open-GL or Direct3D render mode, the part can be visualized using smooth shading. The variations in colour will now be shown more gradually and no longer as separate triangles. Note that only the visualization of the part changes, the number of triangles and the accuracy of the STL are not changed.
Use Material Editor	OFF: When you click on the coloured circle in the Part List tool sheet, a colour palette appears. ON: When you click on the coloured circle in the Part List tool sheet, the material editor dialog appears. Besides the colour, you can also select the material properties. The colours can be described in 2 ways: RGB (red, green, And Blue) and HLS (Hue, Lightness, and Saturation).
Enable Renderer Copy	By Enabling this flag you tell the application that it's ok to keep a copy of the triangles in graphics card memory. This will speed up the rendering a lot on most systems. If your system doesn't have a lot of graphics memory or you work with very large files it's best to disable this feature.
Show Wireframe when frame rate drops below	This flag allows the application to only render wireframes or points of parts when rotating the view thus interaction speeds up in the 3D-views.

File I/O > Application Working Folders



Application Working Folders

You can browse by clicking on the folder icon and set a folder as default folder.

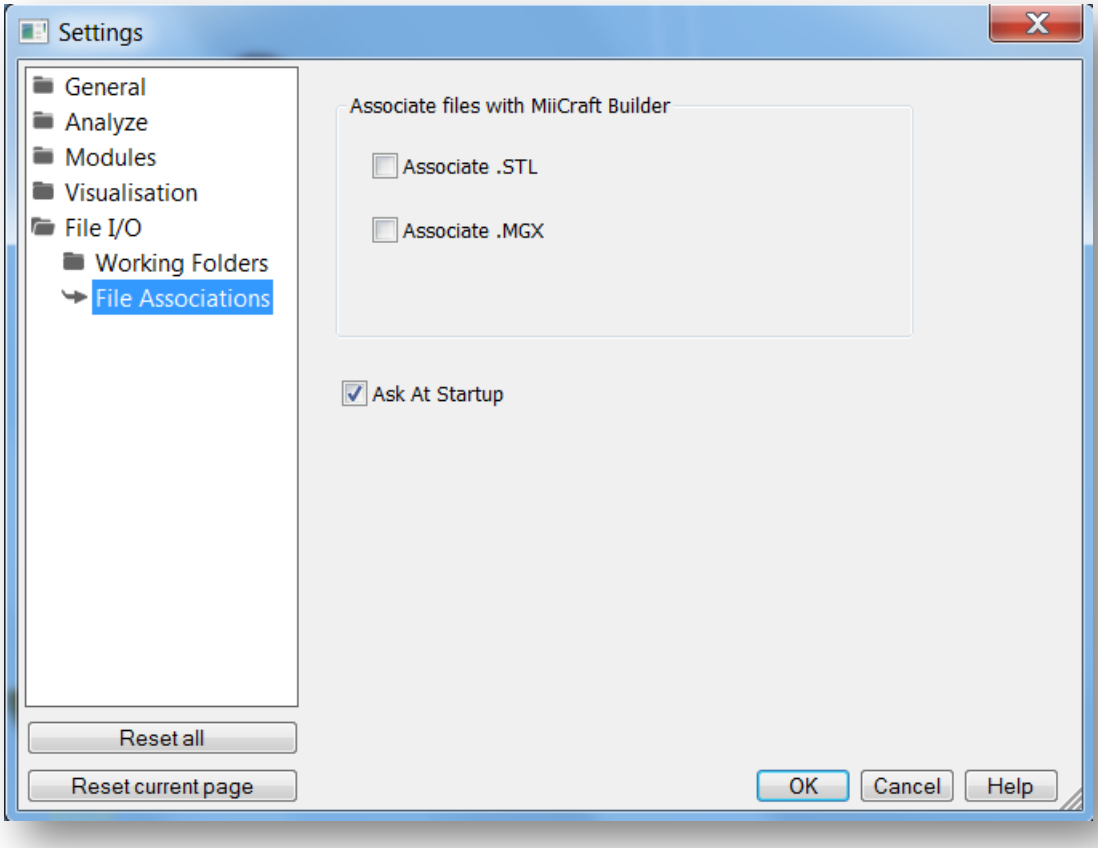
Advanced Options

Option 1 Creatr always proposes this folder when a part needs to be loaded or saved.

Option 2 Creatr only proposes the chosen folder the first time a file dialog pops up. The succeeding times a file dialog pops up, the previously selected folder is used.

Option 3 Creatr proposes this folder the first time when a part needs to be loaded or saved. The next time, he proposes the last selected folder.

File I/O > File Associations



Associate STL files with Creatr

Associate .STL	Offers you to associate STL files to Creatr
Associate .MGX	Offers you to associate MGX files to Creatr
Ask at Startup	You can check this association each time Creatr started. When the association is not there anymore, the user will be prompted.

System requirements

Minimal hardware requirements

CPU

- Pentium IV 3 GHz or higher

Memory

- 2 GB RAM

Free Disk Space

- 200 MB

Display

- 1280 x 1024 resolution or higher
- 32-bit color depth (True color)

Video Card

- 'NVidia GeForce' or 'ATI/AMD Radeon'
- DirectX 9 compatible video card
- At least 256 MB of memory
- At least a memory interface width of 256-bit

- 'NVidia Quadro', 'ATI/AMD FireGL' or any 'Intel' gpu chipset are **not** recommended

Operating Systems

- Creatr **runs** only **on**:
  - Windows 7/8 SP1 (32bit/ 64bit)
- Creatr **will not run** on:
  - Windows 98
  - Windows XP SP3 (32bit), SP2 (64bit)
  - Windows Vista SP1 or later (32bit/ 64bit)
  - Windows 2000
  - Windows Server Editions
- Creatr does **not** run natively on **Mac OS X**.
- Creatr does **not** run natively on **Linux**, or **any other operating system** not listed above.
- Virtualization systems such as VMWare are not recommended.

Supported Browsers for built-in Information Page

- The built-in Information page will use Internet Explorer (IE) to connect to the internet. We support IE10, IE9, IE8 and IE7. Versions older than IE7 are not supported.

Creatr License Agreement

ATTENTION

TO BE READ CAREFULLY BEFORE USING CREATR SOFTWARE

This license agreement (the "Agreement") is a legal agreement between you (either an individual or a legal entity) and Materialise for the software product identified hereafter, which includes computer software and electronic documentation ("Software").

Please read the following license agreement carefully before using the Software. By installing, copying or otherwise using the Software you agree to be bound by the terms and conditions of this Agreement. If you do not accept the terms of this Agreement, you are not authorized to install, copy or use the Software.

DEFINITIONS

The following terms shall have the following meanings:

"Licenser": MATERIALISE

"Licensee": Holder of the license as specified in the order document issued by Materialise.

"Licensed Material": Media containing the software, the software itself, and the user documentation.

"Software": Creatr, Computer programs in machine-readable form (object code), proprietary to Materialise, which Licensee has ordered from Materialise.

"Documentation": shall mean the technical publications prepared and delivered to Licensee by Materialise relating to use of the Software, such as reference and tutorial manuals.

"Password": shall mean the password transferred from Materialise to Licensee allowing Licensee to use the Software.

1. License Grant

1.a. License
Licenser hereby grants Licensee, who accepts, a nonexclusive license to use the Licensed Material, only as authorized in this License Agreement. The Software is made available in

Object code. Licensee agrees that he may not reverse assemble, reverse compile or otherwise translate the Software or any part thereof. Licensee agrees that he will not assign, sub license, transfer, pledge, lease,

Rent or share his rights proceeding from this License Agreement, nor sell Licensed Material or any part or copy thereof.

The License is granted for a period of time, which is fixed in the key-file.

1.b. Single computers
The Software may be used only on an agreed upon number of single computers owned, leased or otherwise controlled by Licensee. For the purpose of this agreement a single computer is defined as one seat with one central unit, one display and one keyboard.

1.c. Key file
Access to the Software is granted by the use of a key file associated with a server. Each key file has a specified validity period.

2. Licenser's Rights

Licensee acknowledges and agrees that the Software and User documentation are proprietary products of Licenser protected under copyright law. Licensee further acknowledges and agrees that all right, title and interest in and to the Licensed Material, associated intellectual property rights, are and shall remain with the Licenser. This License Agreement does not convey to Licensee any interest in or to the Licensed Material, but only a limited right of use, revocable in accordance with the terms of this License Agreement.

3. License Fees

The license fees paid by Licensee are paid in consideration of the licenses granted under this License Agreement. Communication of a valid key-file is subject to payment of the License fees.

4. Term

This Agreement is effective upon the grant of the key-file by Materialise to the Licensee for the agreed upon period of time.

Licensee may terminate this License Agreement at any time by destroying any Licensed Material in his possession or by returning the Licensed Material and any copies or extracts therefrom to Licenser. No refund of any amount paid will be made, except as granted in accordance with paragraph 5.' Warranty' hereunder. Licenser may terminate this License Agreement upon breach by Licensee of any term hereof. In case of termination or cancellation of this Agreement, the license will immediately be withdrawn and stopped.

5. Warranty

Licenser warrants, for Licensee's benefit alone, that during a period of thirty days from the effective date of the License Agreement, the Software shall operate substantially in accordance with the functional specifications in the User's Documentation. If during the Warranty Period, it appears that any part of the Software does not function in accordance with its specifications, Licensee shall notify the software vendor hereof and may return the Licensed Material after approval therefore has been given by the Licenser to the software vendor. Licenser shall, in its sole discretion, decide how to remedy such breach of warranty. Licensee agrees that the foregoing constitutes his sole and exclusive remedy for breach by Licenser of warranties made under this Agreement. Except for the warranties set forth above, the Licensed Material, and the Software contained therein, are licensed "as is", and Licenser disclaims any and all warranties, whether express or implied, including, without limitation, any implied warranties of merchantability or fitness for a particular purpose.

6. Limitation of Liability

Licenser's cumulative liability to Licensee for any loss or damages resulting from any claims, demands or actions arising out of or relating to this Agreement shall not exceed the license fee paid to Licenser for use of the Licensed Material.

In no event shall Licenser be liable for any indirect, incidental, consequential, special or exemplary damages or lost profits, even if Licenser has been advised of the possibility of such damages.

7. Ownership

The Software is protected by copyright laws and international copyright treaties, as well as other intellectual other intellectual property laws and treaties. Title, ownership rights, and all intellectual property rights in and to the Software shall remain with Materialise and/or its licensors.

Licensee shall not modify the Software, reproduce it, create derivative works or, or attempt to reverse engineer the Software or otherwise attempt to derive the source code of the Software, either directly or indirectly.

8. Governing Law

This License Agreement shall be construed and governed in accordance with the laws of the location of the registered office of the Licenser.

9. Severability

Should any court or competent jurisdiction declare any term of this License Agreement void or unenforceable, such declaration shall have no effect on the remaining terms hereof.

10. No Waiver

The failure of either party to enforce any rights granted hereunder or to take action against the other party in the event of any breach hereunder shall not be deemed a waiver by that party as to subsequent enforcement of rights or subsequent actions in the event of future breaches.